AMERICAN GAS ASSOCIATION MONTHLY

NOVEMBER · 1937

The A. G. A. Convention in Cleveland

•

Getting in Step with the New Tempo
W. W. WINTER

•

Conservation—An Industry Opportunity
N. C. McGOWEN

•

Serving American Industry with Gas
FRANK H. ADAMS

1937 Convention Papers and Reports

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AMERICAN GAS ASSOCIATION MONTHLY

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N. C. McGowen, newly elected president of the American Gas Association, has long been prominent in the natural gas industry. He is president of the United Gas Public Service Company, Shreveport, La. He took a leading part in the development of the great natural gas fields of Louisiana and in promoting the interests of the old Natural Gas Association of America. After this association became a part of the American Gas Association, Mr. McGowen served as the first chairman of the Natural Gas Department. He has been a consistent advocate of natural gas conservation. Outside the gas industry, he is identified with a large number of industrial enterprises.

AMERICAN GAS
ASSOCIATION
MONTHLY

James M. Beall, Editor

The Cleveland Convention

THE nineteenth annual convention of the Association, which ended just a month ago in Cleveland, was notable in many respects.

The registration of 2569 persons, with hotel reservations indicating an actual attendance in excess of 3000, was gratifying. Considering the fact that there was no exhibition of gas appliances and equipment and that the previous mid-west convention in Chicago in 1935, with the added inducement of the World's Fair, attracted almost a thousand less, this attendance was remarkable. It more than bore out advance forecasts based on hotel reservations and other commitments.

But this is not the noteworthy feature of the attendance. These figures alone are not significant except that they indicate the alertness of the industry to keep in touch with new developments. The important thing is that the registration was truly representative of the entire industry. An analysis of the attendance shows that more people came from far-distant points than ever before.

However, that is still not the complete picture. Without exception, sectional and departmental meetings, as well as general sessions, reached high marks of attendance. This is especially impressive in view of the fact that some of the previous conventions, with exhibitions of course, have attracted more than twice the total registration of this one.

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The calibre of papers, addresses, and committee reports presented was extremely high. At the general sessions such vital topics as industrial relations, research, national advertising, building, conservation, the place of gas in home and industry, and equally important subjects were discussed with clarity by experts from various parts of the country. Problems pertaining to special phases of the industry were covered in great detail by informative papers and reports presented at the sectional and departmental meetings. Many of these contributions have appeared in the MONTHLY and the gas trade journals.

Last year the start of the national advertising campaign injected new spirit into the convention. This year, with the campaign an accomplished fact and a year's successful operation passed, discussion centered around ways and means of making the campaign more effective. It was conceded on all sides that the campaign to date had resulted in greatly increased prestige for gas. It was emphasized, however, that ultimate success depends upon the extent to which local companies tie-in with the national campaign. A series of regional meetings will be held to strengthen the campaign at this point.

Of especial interest at the convention was the outstanding reception given to the announcement of the program now being inaugurated by the Association's newly established Home Appliance Planning Bureau. The industry, as represented at the convention, was enthusiastic about the program as another step toward improving the domestic sales picture.

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Cleveland as the setting for the meeting proved a happy selection. Hundreds of people were enabled to visit the A. G. A. Testing Laboratories and gain first-hand information on the great cooperative program of appliance testing and research conducted there. A new and better understanding of this work is certain to result.

The entertainment program, arranged under the direction of W. E. Steinwedell, was received with acclaim. The East Ohio Gas Company, as host, cooperated in every way to make the convention a success. In short, the convention was the natural climax of a year of accomplishment in the industry.

In starting a new year of Association activities, we cannot pass without a word of tribute to the splendid job done by our retiring president, Herman Russell. Throughout the year, he has given a great deal of time and tremendous energy to his task as leader of the Association. He has interested himself in its every activity and offered much constructive advice. He has addressed meetings of gas men in all parts of the country. Consistently supporting the cause of national advertising, Mr. Russell was, in fact, head of the committee which raised the funds which made it possible.

But that is not his greatest contribution. In his own company, he has carried on studies of the economics of gas and electricity which have demonstrated conclusively the fundamental soundness of the gas industry. He has applied these studies to other sections of the country with impressive results. His addresses, delivered wherever he had an opportunity to appear, have rightly been called classics both here and abroad. Singlehanded he has added immeasurably to the vitality of the industry. The industry has been fortunate in having such a leader.

The New Momentum—Let's Get in Step with It

By W. W. WINTER

President, Atlanta Gas Light Company

W. W. Winter

THE gas industry in the United States in two years is spending slightly less than a million dollars in advertising in national magazines of general circulation.

There are 717 gas companies participating. They represent over eleven and a half million meters. Since we like to size things up on a meter basis, this is an expenditure of four cents a meter per year for the companies participating.

Advertising Perspective

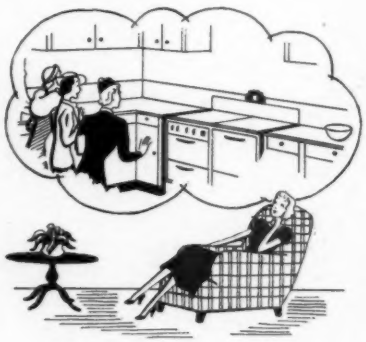
I do not wish to minimize the magnitude of this campaign—a million dollars in two years used to be a lot of money and to some people who make the money they spend it still is. But in order to get a proper perspective it might be worth while to consider that in 1935—not a particularly good business year—more than 726 million dollars were spent in the United States for advertising and a hundred and twenty million of those dollars were spent in magazines alone so that related to the total the gas industry's campaign amounts to something around one fourth of one per cent.

Nevertheless, it has taken seventeen years to accomplish this, and compared to other cooperative programs of a similar nature, it is not only of most respectable proportions but is astonishingly robust.

So far as I could definitely prove to you, not one gas appliance may have been sold directly and solely by this campaign and not one family which otherwise would have used some other fuel may have been persuaded by it to use gas.

But regardless of this, I can definitely report that there is not only every indication but unmistakable proof that the campaign is already highly successful, and as well, that it is proving in its related results one of the most important forward steps in the industry for the past fifty years.

Do not misunderstand me. Unquestionably the campaign has already resulted in a large volume of additional sales of merchandise and in increased use of gas. Unquestionably the increase in our business as a direct result of the campaign would amply justify not only the present but a considerably more adequate expenditure.



But if this were not true, there is, as I said, unquestionably clear evidence that its collateral results already beginning to be shown would amply justify it.

For the past fifteen years, and for probably longer, a great difficulty in the way of the gas industry has been a widespread and devastating defeatism which almost amounts to lack of self respect and certainly does amount to a lack of self confidence. We had for so long before that time enjoyed a virtual monopoly that many of us had forgotten that every business must fight and fight continually for improvement and for more business. It must do this in order to make progress and to keep its place in the scheme of things and even in order to keep itself healthy.

Without much effort we had graciously accepted the growth and the increased profits which had almost been forced upon us. We had accepted our position in the scheme of things as permanent and as our natural right. We were complacent, over confident and possibly a little lazy.

Then came electric competition, young, aggressive, amply financed, with a romantic appeal of modernness and a willingness to fight which was entirely undignified and to us in our complacency was almost scandalous. And to the outrage, shock and horror of gas executives this electric competition with an inferior service, with higher prices, and, so to speak, with no social position but with aggressive sales and advertising effort began to make serious inroads into our business—began to grow to gigantic proportions and to establish itself in the public mind pretty solidly as the number one public utility service.

Gas Fights Back

To many gas executives it is now clear that as far as the field which was, and is, primarily ours by right of merit, the loss of the business which the electric competition has taken away from us has been due to nothing so much as the attitude of the gas industry itself in the face of such a situation. I hope that it will not seem too harsh a critism of ourselves and our predecessors to say that our attitude was strikingly like that of the pampered child who has his candy taken away from him by the tough boy. We did everything but fight back. We wailed to high heaven of the injustice being done us. We strove to gather the remainder of our business to us in a desperate clutch. We raised prices and rates on that business to try to maintain profits—we loudly demanded and indignantly insisted upon our right to a "fair return on our investment." The world owed us a living and was cheating us before our very eyes. But we stayed in the rut.

Obviously such a business policy got us nowhere. The public was particularly unsympathetic. Just as obviously

we would have lost far more of our business than we did except for the fact, which was a fact then and is no less a fact now, that the service which we had to offer is in itself, for the purposes for which it is offered, essentially and intrinsically tremendously superior to anything our competition can offer.

What we did lose was our self esteem, our confidence and our morale. We became resigned to the idea that the gas industry was outworn, old-fashioned, had seen its best days and was on the way out. It was easier to do that than to really fight back.

Public Evaluation of Gas

And you may be quite sure that the public was ready to accept us—not at the valuation of our competition—but at our own, which most unhappily was about the same. And the business world came near to being witness to the spectacle of a tremendous industry with an immeasurably superior product, with a position established nearly a century, being browbeaten into an insignificant position by the sheer aggression of a wide awake competitor with an inferior product but far superior business methods.

So that we may grasp the significance, the necessity and the importance of the present advertising campaign to us, let us look for a moment at what part advertising and the closely related field of public relations played in this near tragedy. Let us, by putting ourselves in the position of the public, see what opinion they had of us and how they got it.

The public realized, of course, that we were an old industry. This might have meant to them and might today mean just as easily that we were established, dependable, experienced and trustworthy—as what it was beginning to mean, that we were antiquated, out of date, behind the times, a survival of the horse and buggy days.

They looked at our plants. They were eyesores, for the most part, dirty, dilapidated appearing, evil smelling. They were located always in the most desolate part of every city. And they seemed to fit there perfectly; certainly adding nothing in appearance or desirability to their neighborhoods.

They looked at our offices—dark, gloomy, old-fashioned, located usually on side streets; for the most part they added nothing there, either, in appearance or atmosphere. They looked at our equipment, our nondescript service trucks. They saw our service men and meter readers—efficient, no doubt, but far from impressive in appearance.

Illustration giving theme of current national gas advertising

Then they looked in their own kitchens. There they saw an ugly, dirty, old-fashioned and most unattractive apparatus—a gas stove. It was a stove, to be sure, that did its work and will still today do its work despite appearances to the contrary far better than anything the competition had to offer. In that fact has lain, under the circumstances, our salvation. But we have used that fact as a lifebelt instead of a powerful force for new business.

Strange as it may seem, all these things were not the most important factor in public opinion as to the evaluation of the gas industry. Public opinion is far less influenced today in most matters by what the public actually sees than by what the public reads, by the pictures that the public sees and the general atmosphere in which the public creates and lives.

If this seems hard to believe, think for a moment how the very definite opinions you have of most subjects, of airplanes, of diesel steamlined trains, of Germany, of the President, of a thousand other things, have been formed. Certainly not by personal experience with them; certainly by what you have read and the pictures you have seen of them.

"Electric Age" Fantasy

Now what happened when the public read a newspaper or a magazine. There, page after page, illustration after illustration, story after story, presented the wonders, the modern marvel of electricity and all its works. The wonders and the beauty of electrical kitchen and household appliances met the eye in every magazine—in every newspaper. Unconsciously the housewife compared the beautiful electrical range on the printed page with the ugly out-of-date, but faithful kitchen gas stove.

Is it any wonder, then, that such ex-

pressions as "the electrical age" "the wonders of modern electricity" and the like came to be firmly fixed in her mind? And tragically, along with them came such expressions as "the gas house gang," "the gas house district," "ugly as a gas stove" and the like. By devastating contrast this fixed firmly in her mind the relative importance and desirability of our industry and our service.

The irony of the situation is that during all this time there has never been a period that the gas industry has not had to offer her as beautiful, far more efficient and far better appliances and far better service than any competitor could. And this is true in greater measure today than ever before. But to all intents and purposes we might as well have kept it a secret.

Is it any wonder that our salesmen, our employees and our executives, under circumstances such as these, were at heart apologetic, cowed and browbeaten—willing to accept and be grateful for the second place among utility services that was accorded them?

Government Refrain

And is it any wonder that the Government itself and the great political parties took up the refrain and by inference and direct statement in torrents of newsprint proceeded to add to the opinion already formed that electric cooking, electric water heating, electric labor saving was the salvation and hope of home and of country? Why, when it was undertaken to punish the important utilities, for reasons which seemed good to them, the gas industry was almost forgotten and was included mostly as an afterthought!

Now, under these circumstances, let us see what our National Advertising Campaign is doing and can do for the industry. The situation was so bad that there are actual advantages in it. Last year, when the first full-page advertisements in four colors appeared—attractive, modern, showing not the old gas stove but truly beautiful modern gas ranges, telling simply, forcefully and effectively what they were like, in high class modern publications, with no apologies, actual or inferred—it was real news, unexpected and interesting, and the public was interested and pleasantly surprised.

It is a fact that we more readily change our opinions suddenly and drastically than gradually and slightly. The very contrast of what they saw with preconceived ideas which they had if they thought of us at all added tremendous force and impetus to a brand new good opinion of gas and gas appliances in the public mind.

I would not have you underestimate the value of this change of opinion on the part of the public when I say that it is secondary, in my mind, to the

transformation which it has brought in our own thinking and that of our employees about our own business and the superiority of what we have to offer. It is so fixed a principle that we value our own and ourselves by what others think that there is scarcely a writer of romantic stories who has not once but repeatedly written the story of the home-town girl, disregarded and underestimated by the home-town boy, who has suddenly been made glamorous and desirable by the flattering attentions of some stranger.

But does this change in our own morale amount to anything? Is it tangible? Is it worth spending money for?

I think so. I think it is absolutely essential and I think it is the greatest single force which will make for the rebirth and progress of our industry.

I recently had occasion to observe two competing businesses. Both were highly successful, progressive and assured, apparently, of great success. The morale of both was high. There was a change in management of one of them, a change which definitely and suddenly affected its morale. Within a period of six months its business volume had dropped seriously, it became disorganized and as clearly as anything can be indicated, it is headed for the rocks. It has the same product, almost identically the same personnel, better business conditions. The only change is in morale and that, by the operation of the vicious circle in which it finds itself, is steadily getting worse. The worse business gets, the worse morale becomes—and the worse morale becomes, the worse business gets. You have seen the same situation occur.

Breaking the Vicious Circle

If I am not mistaken, that is the sort of vicious circle that the gas industry has been struggling in for many years and it is the vicious circle that it is now breaking. And if I am not more greatly mistaken, the national advertising campaign and its implications are going to be the most valuable force in breaking it.

I hope no one will infer that I am discounting and attaching no importance to the other most important factors in the rebirth, rejuvenation and rehabilitation of the gas industry that is taking place. It would be most foolish to do so. Principal among these, of course, have been the technical advances and the increased knowledge that have made possible such tremen-

dous improvement in the usefulness and economy of gas appliances that it constitutes a real romance of modern scientific achievement. But our service and our appliances have always been superior.

Of no less importance commercially has been the recognition that a gas appliance does not necessarily have to be ugly, that it may in fact be beautiful and that it had better be. The progress in this direction has been no less remarkable.

Nor do I mean to say that there has been no advertising or selling effort

worth mentioning before the last two years. Unquestionably there has been a desperate rattling of dry bones in this direction for several years. These efforts have achieved some success, relatively speaking, and compared with our former condition of more or less dry rot have improved our condition quite a little.

But unfortunately the very desperation of most of them has served, if anything, to verify the public's impression that the gas industry is pretty much a second rate affair. For most of our sales effort tended to be defensive; we have sold our competitors shortcomings rather than our own excellence. We have made strictly price and economy appeals with something of the implied attitude: "Yes, we are inferior but look how much cheaper."

Blessing in Disguise

It may be a very great blessing (in a very effective disguise, I admit) that recent developments in electric rates have in many cases kicked the props out of that position. This is at last forcing us to admit to the public, apparently with the utmost reluctance, that our competitors have never yet been able to offer a service even nearly approaching our own in efficiency, de-

sirability or convenience, and from present well considered indications they never will.

A part and parcel of the bad impression that our sales attitude has made, and not the least, has been made by our individual company advertising when we have used any. While happily, there have been many exceptions, by and large it has been nothing of which any industry could be proud. Our very anxiety to make sales, right now, together with a total disregard for the impression we might make upon the public, has led us to the use of typical "sale" copy, of the type most frequently associated with second rate businesses—copy of the pointing finger, "Hurry, Hurry, This Means You, Prices Slashed" type, with no attempt either to make our ads attractive or to present attractively the real merits of what we have to sell. As I said, there have been noteworthy exceptions to this and manufacturers have furnished us with canned copy which has been as good as they dared to make it with any hope that the companies would use it. But in general the unattractiveness, poor taste and second-rate appearance of our advertising has fitted perfectly with the second-rate opinion the public had of us.

Here's an experiment you might try. If the result shocks you, nobody need know it. Get your local newspaper. Go through several issues. Pick out the

advertisements of several concerns that you believe to be less reliable than the average and whose merchandise you would distrust. Put them beside a few samples of your own company's advertising picked at random from your files and see if you note a sort of family resemblance. If you do, you may be quite sure that the public long since has also noted it.

Let's look, from this standpoint at our national campaign. In the first place, they are appearing in high class and *only* in high class magazines. The present list includes the *Saturday Evening Post, Life, Good Housekeeping, Woman's Home Companion, McCalls, Pictorial Review, American Home, Better Homes and Gardens, House and Garden,* and *House Beautiful.* The committee has deliberately avoided other magazines with less "quality" association. These magazines see to it that only high class, reputable concerns use their pages and the public knows that they do.

The advertisements themselves are full-page advertisements. They are not skimped or crowded and this use of the full page, in addition to being the most efficient size for an advertisement from the standpoint of getting attention, also definitely suggests quality.

The advertisements themselves the first year were in natural colors printed by the four-color process, with the illustrations from natural color photographs. This alone gave them a tremendous advantage in comparison

with most other advertisements and together with attractive, artistic typography and layout, again unmistakably and forcefully suggests quality. It is a matter of some regret that in order to use the limited available funds for more space, the program this year calls for only two colors to be used but the good taste and the implication of quality and prestige remain.

Quality Appeal

Furthermore, and most important, we really have something to advertise that no one else has and we are advertising it instead of frantically dwelling on low prices and economy. That suggests quality, too, and it is also the basis of any successful campaign. Also, it is news to the public. I have the possibly unworthy suspicion that it may also be news to many in the gas industry. Let me give you some examples.

The top burners of today's ranges have been increased in efficiency about fifty per cent over those of only four years ago. Increased speed follows naturally. They will, for example, heat five pounds of water 140° in less than eleven minutes. It formerly required over sixteen minutes. I mean, of course, on the gas range of five years ago. How long it might take on an electric range, I wouldn't undertake to say. We'll let the electric people fumble with that one. This refers of course to the smaller burner of 9 M B.t.u. per hour input. With larger burners this time is reduced to eight and a half minutes. These larger burners are for

larger utensils and are far superior in heat distribution.

There is now obtainable on a modern gas range a really insulated oven. A recent test of one, and there are a number, showed an oven temperature of 500°, with the average outside surface temperature only 26° above that of the room.

Not long ago it required seventeen minutes to preheat an oven to 500°. There is one now which requires five minutes and hardly any require more than ten minutes.

Broiler temperature has increased one hundred per cent, with a perfectly even distribution of heat. And broiling may now be done without smoke. Rotating and "pull out" broilers are available.

All of this has been done without any sacrifice of the perfect flexibility, convenience or economy which we have always had. And with the added, and by no means unimportant advantage of greatly increased beauty of design.

Gas Aristocrats

Corresponding improvements have been made in water heaters. Automatic storage heaters have been made ten per cent more efficient in the last two years, with a corresponding increase in efficiency of other types and a tremendous improvement in appearance of all types.

It would have been hard to improve the efficiency of radiant heaters but they have been made wonderfully more attractive. Automatic central heating plants need only more attractive and streamlined rates. Where such rates have been made, either in natural gas, or manufactured gas territories their use has increased tremendously: I can't think of anything to be added to the perfection of the service they give.

Gas refrigerators are the unquestioned aristocrats of the refrigeration world. I can't suggest any improvement in that field, either, except perhaps a large dose of competition for the good of the manufacturer's soul.

Now these things, with the older real advantages, are really worth advertising, and the national campaign is advertising them. They are real, they are worthwhile and they really mean something to the public.

It is fair to ask what concrete results have been attained so far by the campaign. It is true, but not necessary to answer, that advertising of this nature cannot in a year undo the loss of prestige which has been under way for many years. For there are very definite and very concrete evidences that the tide has turned.

First, and foremost, it is creating among us a new self respect and pride in our industry and together with that a new respect and a higher estimate on the part of the public. The two inevitably go hand in hand.

In half a dozen highly significant instances other great industries have within the past year sought our cooperation. They are no longer hesitant to be associated with us as a backward, old-fashioned and waning industry. Recently one of the largest national advertisers, a manufacturer of floor covering, illustrated his advertising with a modern model kitchen. The ranges were gas. More than a hundred million people saw those ads.

Capable and highly desirable young men are beginning again to be interested in gas as a career. I am told that financing is becoming easier; bankers no longer regard us as basically a bad long-time risk.

Manufacturers of gas appliances are taking on new courage, and planning to expand their own advertising efforts and new blood is coming into the industry as manufacturers of other lines are beginning to venture into the gas field and their advertising is lending their own prestige to us.

Sales of fighting gas companies have increased and more significant, sales of gas appliances by independent dealers have increased tremendously and there are many more of them.

Those are facts and I believe they are concrete. I know they are worth while. I believe you will agree that they show the beginning of a very different picture.

But my hope, and I believe it is well founded, for soul satisfying advances in the gas industry rests not so much on what this campaign will produce for us in dollars and cents sales, as in the evidence that the campaign affords that at last, at long last, we in the industry are beginning to fight and to fight effectively for our own. The campaign is not only worth while intrinsically; it is, I hope, a most significant symptom of a vastly improved attitude on our own part.

How To Cooperate

Many gas executives have asked this most pertinent and most important question: "What can I do and what can my company do to co-operate effectively?"

Well, of course, they can support it. They can prevent its being a flash in the pan. They can avoid the attitude: "Well, we have contributed four cents a meter for two years and our troubles are not yet all solved—what's the use?"

But I will give you my opinion of the most effective kind of cooperation —the kind, I think, that regardless of everything else will guarantee you a benefit.

The gas industry, and that, in each individual community means the gas company there, is being presented to the public in a new light. It is being forcefully and attractively presented as, modern, wide awake and progressive. It is being presented on its own merits, not as a second rate industry but without apology as the first in its field. Its service is being presented as the finest and best service for its purpose that can be offered. It is being presented as self respecting, proud of its history and determined to improve its past record.

I think clearly that the best cooperation we can give to the national advertising campaign is to live up to it.

Conservation—An Industry Opportunity and Responsibility

By N. C. McGOWEN

President, United Gas Public Service Company, Shreveport, La.

CONSERVATION of a natural resource always is an opportunity and a responsibility, and in my opinion the natural gas industry has been practicing conservation since its inception. However, we have concentrated our studies and efforts primarily to conservation polices on gas produced from gas wells and gas flowing through pipe lines, and have not been studying the significance of gas produced with oil from oil wells. Here is a real opportunity for the natural gas industry to cooperate with the oil industry and render a service of vital importance to the two industries involved and to the public. It is an industry responsibility, and I would like to limit most of my discussion today to the intriguing subject of gas produced with oil.

Production Problems

The problems of producing gas, supplying it to pipe lines, and maintaining adequate gas reserves each year become more closely interrelated with many of the production problems of the oil industry. The importance of technical knowledge regarding gas produced with oil under high gas-oil ratio conditions (20,000 cubic feet of gas per barrel of oil and water) was recognized by the American Gas Association several years ago when they included studies of combination gas and oil wells in the work of the Subcommittee on Gauging Gas Well Deliveries. At that time we were thinking primarily of what in our own minds were gas wells producing small quantities of oil, but since then much thought and development has been directed toward production practices in the oil industry to utilize fully energy in a reservoir due to gas in solution in oil and to gas associated with oil at high pressure.

The gas industry is concerned with present and future developments in oil production practices and should help in every way possible to secure more efficient use of gas energy to produce oil, realizing that this policy will result in many oil fields being used as dependable gas reserves.

The gas and oil industries have a common ground for directing thought to more efficient production practices, but too often the main objectives of such a program of study are clouded by misunderstanding such controversial terms as conservation, waste, proration, regulation, restriction of production, gas-oil ratios, bottom-hole pressures, and spacing of wells. Use of these terms and data described by them are more or less confined to the "proration era." Many in the industry who have not followed technical developments look upon them only as a means to an end—regulation and proration. I would like to discuss the exact meaning of these different terms in an endeavor to clear up some of the misunderstanding surrounding them—and show that under a system of conserving gas and oil the best interests of the public are served, and direct dividends in dollars and cents are paid into our pockets.

Orderly Marketing Essential

In discussing the work of the Subcommittee on Gauging Gas Well Deliveries at the convention of the Natural Gas Department at Dallas, Texas, May 5-8, 1936, I pointed out that several natural gas companies were becoming interested in oil production from the standpoint of natural gas usage, and suggested, since we are interested vitally in conserving both these resources that oil should be produced on a basis to secure the maximum utilization of gas produced with it. This gas being produced with oil should be handled properly, and in the orderly marketing of gas and in the orderly servicing of that gas to customers it is better for it to be handled through transmission systems already installed provided it can be handled in an orderly manner. It can be handled in an orderly manner only if it comes out of the well in an orderly manner.

These statements are more pertinent to us today than they were a year and one-half ago. The trend toward deeper drilling for oil, which I will discuss later, has stressed the need for efficient use of gas energy to lift oil to the surface of the ground. It also has resulted in a condition where large quantities of gas can be blown to the air and wasted if proper measures for the orderly handling of this gas cannot be worked out. This is because more gas is in solution with the oil at the higher pressures for these greater depths, and often there are, in addition, large reserves of "free" gas in the same reservoir with the oil. The natural gas industry is concerned with this condition for two main reasons: first, excessive gas waste from oil field operations, when widely publicized, leaves the impression of a great waste of a natural resource to the people, and gas to them is considered a costly product; second, the large quantities of gas usually associated with oil in these deep reservoirs are sufficient to constitute dependable gas reserves if properly developed and properly produced.

With these ideas in mind, we begin thinking in terms of gas energy, control of gas-oil ratios, bottom-hole pressures, and spacing of wells—all of which technical thought is being confused with generalized discussions of conservation, proration, and State regulation.

Conservation

The subject of gas conservation has been discussed before natural gas conventions for many years. We began work on the problems concerned with it when the Main Technical and Research Committee first was organized, and our first problem (in 1922) was

Address before A. G. A. convention, Cleveland, Ohio, September 28, 1937.

studying leakage from natural gas transmission lines. In 1925, study was started on gas production problems, and gas conservation was one main objective of this work. The production committee has been studying combination gas and oil wells for the past few years, again thinking of gas conservation. However, in discussing gas conservation when oil and gas are produced from the same well, I believe we should think of "waste." What constitutes waste of gas when it is produced with oil? What is the present definition of waste from a legal standpoint? What revisions should be attempted in the present concept of waste to secure better future production practices? What is the ideal concept for the future?

Legal Waste

Very simply waste of natural gas when producing oil is gas allowed to escape without being utilized properly. Waste has been defined legally in the statutes of different States.

In Texas, the Railroad Commission has had the authority and power to promulgate and enforce regulations pertaining to gas production, whether from gas wells or from combination gas and oil wells, since 1919, and in 1931 the Commission was given authority to fix and determine, after proper hearing, maximum gas-oil ratios at which oil could be produced from different wells and different fields. One feature of the Texas law is that waste of oil shall not be construed to mean economic waste.

Louisiana was one of the first States to have real conservation rules and regulations on gas production but had no definite control of gas waste incident to oil production until last year, when a new proration and conservation bill was enacted which not only enabled but required the Conservation Commissioner to issue proration orders and regulations on the basis of gas-oil ratios, bottom-hole pressures, and other such factors for the prevention of waste. Prior to the passage of this law the only definite control over gas waste incident to oil production was based on a provision that if the value of the volume of gas produced with a barrel of oil at three (3¢) cents per thousand cubic feet was greater than the market value of the oil, the wells were operated as gas wells under the strict Louisiana conservation laws pertaining to such wells.

Waste is defined fully in the Oklahoma statutes. As regards oil production, the meaning includes economic waste, underground waste, surface waste and waste incident to the production of oil in excess of transportation or marketing facilities, and as regards gas produced with oil, the meaning includes the unreasonable production and the inefficient or wasteful utilization of gas, escape of gas into the air in excess of the amount needed for efficient lease operations, and the inefficient use of gas energy contained in the reservoir. The Oklahoma conservation law has been sustained in the Supreme Court of the United States, after being sustained by the Supreme Court of Oklahoma and by several Federal District Courts.

California Conservation

The California law regarding waste is very specific, stating that the unreasonable waste of gas, whether before or after gasoline extraction from the gas, is opposed to the public interest and is prohibited. The statute has the drastic provision that blowing, release, or escape of natural gas into the air shall be prima facie evidence of unreasonable waste. Seven years ago, approximately 42% of the gas being produced with oil was being blown into the air in California—being wasted. Last year, according to available data, this was reduced to a little less than six per cent. This improvement is significant and was due mainly to passing and observing proper conservation laws.

The Michigan law states that the escape of natural gas in commercial quantities into the air is waste and, therefore, is prohibited, it being understood that 1,800 cubic feet of gas per barrel of oil produced shall be considered as the maximum gas-oil ratio in a well producing both oil and gas from the same producing formation, and the use of a higher ratio is prohibited unless it can be proved that for good operating practice and the best interest of a particular field some higher gas-oil ratio is necessary.

The brief summary given above of provisions regarding waste of natural gas incident to production of oil in the statutes of several of the representative oil-producing States is the basis on which all of us—in the gas industry and in the oil industry—have to work to secure better utilization of gas produced with oil and to have less of it wasted to the air.

Proration

As practiced, proration is tied in legally with conservation, or rather, with waste. Evidence submitted before regulatory bodies of the different States in support of a proration order for any field usually is based on what does or does not constitute waste in the field. This has caused some misunderstanding and led to a confusion of the meaning of the two terms—"proration" and "conservation."

In Texas, the law states specifically that the Railroad Commission shall not have the power to attempt by order or otherwise, directly or indirectly, to limit production of oil from a field based upon market demand for oil. Proration schedules of different fields in the State, therefore, have prevention of physical waste as their legal premise. Similar conditions exist in most of the other States, except that proration is not necessarily based on physical waste alone, and arguments bearing on economic waste can be considered.

Oil and gas proration means allocating, on an equitable basis, a proportion of the total allowable production of crude oil or gas for a State to each field, lease or well. Allowable production for a State, in turn, involves consideration of market demand and the curtailing of production to market demand. The allocation of production on an equitable basis between fields, leases, and wells involves consideration of technical factors such as gas-oil ratios, bottom-hole pressures, spacing of wells, and capacities of wells to produce oil and gas.

Proration is not new; its use was suggested as early as 1872 in Pennsylvania. Its first legal status, however, was in 1914, when the Oklahoma Corporation Commission promulgated an order to curtail oil production in the Healdon and Cushing fields. The present era of proration started about ten years ago in 1927 with the Seminole field, Oklahoma. However, it is rather a rude shock to our present day idea of restriction to realize that oil production

from this field was curtailed to 450,000 barrels per day.

Proration now is much more severe than this, and the daily allowable production from most flush oil fields is only a small fractional part of the production the field could make if wells were opened wide. The question naturally arises, then, as to whether proration is equitably fair or not? Whether there are other benefits from the standpoint of preventing waste?

Technical Factors Relating To Oil Production

Proration is related closely in both a practical and legal manner with much of the advancement in engineering technique to produce oil more efficiently, and often, as mentioned before, terms pertaining to this advanced technique are confused as being a part of proration, and proper credit is not given for securing more efficient oil and gas production. Allocation of production to different leases and wells, as a part of a proration order, is based on bottom-hole pressures, gas-oil ratios, ability of wells to produce oil through different sizes of chokes, well spacing, and other similar factors. There is, therefore, an incentive for studying continually these factors by periodic tests to be sure that each lease and each well secures its allowable production.

Use of such technical data also have proved helpful to secure more efficient production operations. A recognized fundamental of producing oil is to secure the most efficient utilization of energy from gas in solution and from gas associated with oil, and to accomplish this it is important to study continually changes that occur in gas-oil ratios, and the decline of bottom-hole pressure during depletion of an oil reservoir. Flowing tests on wells to determine rates of oil and gas production at different back pressures give data, which together with gas-oil ratio and bottom-hole pressure conditions, are invaluable for planning "workovers" on wells to help producing conditions of an entire field. Control of these factors help secure the best use of gas drive from a gas cap above and water drive from the water horizon below an oil-producing zone; in other words, to keep "squeezing" oil between water and gas energy forces.

A. G. A. Executive Board meeting in Cleveland, September 27, during the annual convention. Shown here are, seated, left to right: L. B. Denning, D. D. Barnum, T. J. Strickler, B. J. Mullaney, W. E. Steinwedell, K. R. Boyes, Herman Russell, Alexander Forward, Frank L. Chase, F. A. Newton, C. W. Bennett, W. C. Beckjord, J. F. Rooney, Norman McKee, George E. Welker, C. E. Gallagher. Standing, left to right: H. C. Cooper, W. T. Rasch, C. W. Hunter, H. E. Cliff, N. T. Sellman, James F. Pollard and H. H. Cuthrell

From an economic standpoint, under this kind of operation, it should not be necessary to space wells as closely as formerly, provided full use is made of the restricted production policy such as exists under proration to control reservoir energy forces more easily. In fact, there is a growing opinion within both the oil and gas industries, that under restricted production, wells do not have to be drilled very densely, the percentage recovery of oil can be increased by a wise use of reservoir energy forces contributed by gas and water, and gas wastage can be curtailed to such an extent that oil-producing reservoirs, which in the past have been impossible situations in gas utlization for heat and fuel by gas companies, can possibly in the future be classed as dependable gas reserves. This will be a beneficial situation to both the gas and the oil industries and to the best public interest.

Examples of Fields Producing Gas and Oil

It is not my intention today to stress the subject of gas that has been wasted and is being wasted in oil field operations, but I would like to bring to your attention a few of the developments that have occured in some of our largest fields during the last several years, mainly to emphasize the importance of our looking toward the future.

Oklahoma City Field

The Oklahoma City Field was discovered in 1928 and by July 1, 1936 approximately 326 million barrels of oil had been produced. Using a cumulative gas-oil ratio of 5,000 cubic feet per barrel, which is conservative, the gas production was 1,630 billions of cubic feet of gas,—a large gas reserve.

Some of the first attempts to secure more efficient oil production practices by utilizing the energy in gas were made in the Oklahoma City field. The Engineering Committee of operators in the field recognized this as early as 1930, when it was agreed that every operator should conserve gas in the reservoir, and produce oil from the wells with the least quantity of gas possible. At this time, a maximum gas-oil ratio of 10,000 cubic feet per barrel was considered, and proposals were made to attempt reduction of gas-oil ratios by shutting in wells, switching production, and by reconditioning work. Later it was decided that wells having a gas-oil ratio of 20,000 cubic feet per barrel or less should come under the poration plan of the Oklahoma City field, but if the ratio were greater than this the wells were termed combination gas and oil wells and were not allowed to produce oil unless the gas could be utilized. The ratio of 20,000 cubic feet per barrel is high compared to the 800 cubic feet of gas per barrel of oil originally in solution, but it was a big step in the right direction.

Rodessa Field

The Rodessa field was discovered as a gas field in 1930. It lies in three states—Louisiana, Texas, and Arkansas. It was considered primarily a gas field until 1935 when further development definitely showed it to be what may be termed a major oil field, oil occuring on the flanks of the structure below the gas but in the same reservoir with it.

The field has presented some difficult problems from the standpoint of control. Being in three states, it is subject to three

regulatory bodies. The first oil developments were in Louisiana, and from July 1935 to January 1936, with only a few oil wells, about 1,300,000 barrels of oil and 20 billion cubic feet of gas, both from the oil and non-oil horizons, were produced. This is a tremendous amount of gas. Oil and gas production increased rapidly during 1936, and in August of that year as high as 650 million cubic feet of gas per day was being produced, most of which was wasted to the air. This large gas waste was due mainly to the fact that under the proration plan in effect allocation of production was on a well basis, regardless of the size of tract on which a well was drilled, and the gas-oil ratio condition of a well was practically disregarded.

An order was promulgated January 1, 1937 which provided that oil should be prorated 50% on acreage and 50% on bottom-hole pressure. The idea behind the latter rule was to penalize those who had lowered their pressure by blowing gas, to equalize bottom-hole pressure conditions, and to encourage the conservation of reservoir energy. The order provided further that if a barrel of oil could be produced by not releasing over 2,000 cubic feet of gas, the full allowable would be permitted. Otherwise, production of oil must be reduced to where the total gas production does not exceed 2,000 cubic feet times the full allowable.

Shameful Waste Checked

The effect of this order is fourfold: (1) Wastage of gas has been arrested; (2) A higher ultimate recovery of oil should result; (3) The oil will be produced at a lower unit lifting cost; and (4) The field can be transferred from the category of "shameful gas waste" to a fairly dependable gas reserve. At the present time, oil can be produced at an average ratio of from 2,000 to 3,000 cubic feet per barrel instead of 17,000 cubic feet per barrel. This is a marked step forward.

A recent check-up revealed that the present weighted bottom-hole pressure of the Louisiana part of the field, as of July 1, 1937, was approximately 1,520 pounds per square inch, corresponding to a cumulative oil production of 28,800,000 barrels. If the field had continued producing as in 1936, the bottom-hole pressure for this cumulative production would have been 1,275 pounds per square inch, or there would have been an energy loss defined by a loss in bottom-hole pressure of 245 pounds per square inch. Similarly, under the 1936 production methods, the cumulative production at a bottom-hole pressure of 1,520 pounds per square inch would have been only 24,500,000 barrels of oil instead of 28,800,000 barrels, or there has been a gain of 4,300,000 barrels of "flowing" oil in Louisiana alone.

Referring to gas production, the cumulative gas produced to July 1, 1937 is approximately 300 billion cubic feet. Under the 1936 production methods, the cumulative total would have been at least approximately 365 billion cubic feet—or about 65 billion cubic feet of gas already has been saved during the first six months of 1937 in Louisiana alone.

Cotton Valley Field

The Cotton Valley Field in Webster Parish, Louisiana, was discovered as a gas field in 1921 at a depth of about 2,500 feet. Oil subsequently was found on the flanks of the structure in the same reservoir and the field was drilled for oil. No effort was made to conserve the gas and the waste of about 100 billion cubic feet of gas resulted.

In 1925, that oil being practically exhausted, a deep well was drilled and a new reservoir discovered at a depth of about 4,200 feet. In turn this gas was depleted and moved through pipe lines and deeper drilling found a producing gas and a high gravity liquid at a ratio of 12,500 cubic feet per barrel, at a depth of 8,400 feet. Drilling costs to 8,400 feet will be high and it is necessary to conserve the gas and this high gravity oil to pay out these high drilling costs, even if pipe line investments are ignored. The average gas-oil ratio is 12,500 cubic feet per barrel, regardless of the rate at which oil and gas is produced. Under ordinary methods of operation and without effective gas conservation, this field probably would be developed with an average spacing of one well to each 40 acres and probably denser than this. At least 3 million cubic feet of gas would be produced from each well daily, and the gas reserve would be completely depleted in about four years and only a small part of the gas would be utilized.

This presented an opportunity for some real cooperation, and the net result has been an order from the Commissioner of Conservation requiring a spacing of 80 acres and a proration plan based entirely upon the production and utilization of gas and what oil is produced with the gas.

Cotton Valley excellently illustrates the necessity of cooperation between the oil producer and the gas producer. Alone, it would be difficult for the oil producer to make a profit—the gas producer could not get back his investment. But in combination, with an order that will mean orderly marketing of both products, both the oil producer and the gas producer profit, and the maximum amounts of oil and gas are extracted from the field and utilized.

Future Trend of Drilling and Oil and Gas Production

Production of oil and gas at a depth of 6,500 feet in Oklahoma City, 6,100 feet in Rodessa, and 8,400 feet in Cotton Valley are only examples of what to expect in the future. The average drilling depth in the United States during the first part of 1937 was 3,225 feet compared with 3,000 feet in 1927. The average drilling depth in the Louisiana Gulf Coast for the first part of 1937 was 6,263 feet and for the Texas Gulf Coast 5,553 feet. The trend certainly is toward deeper drilling. Production recently was found in the Lirette field, Terrebonne Parish, Louisiana, at a depth of 11,600 feet, at which depth the bottom-hole pressure was about 5,800 pounds per square inch.

Not only is there a trend toward deep drilling, but there also seems to be a definite trend toward realizing the importance of gas associated with oil at these greater depths. For one thing, we know far too little about the physical characteristics and relationships of oil and gas mixtures under real high pressure and temperature conditions—we do know, however, that often the gas-oil ratios are extremely high and unless corrective measures can be taken and a cooperative effort be made by the oil and by the gas producer, there is a possibility of gas wastage that will be detrimental to both of them.

It is not entirely out of the picture from a conservation standpoint that many deep horizons, although producing some oil at the wellhead accompanied by large quantities of gas, will have to be considered and operated as gas fields. This is going to require some real study and cooperation.

Remedial Plans

It is not my purpose today to tell you how we can conserve and use every foot of gas and every barrel of oil produced from oil and gas fields, but rather to bring to your attention that the problem does exist—that we in the natural gas business and those in the oil business have our common problems and will have more common problems in the future.

Many suggestions on conserving gas produced with oil have been made in the past; although basically and technically these suggestions are sound, they have not been entirely practical, under present operating conditions, from an economic standpoint. This does not mean that such suggestions, or a combination of them, cannot be worked out for future application, particularly if the public interest warrants it and demands it.

These suggestions have included such possibilities as gas storage and maintenance of pressure. In the early life of the Oklahoma City field, some thought was given the possibility of transporting excess gas production to some of the depleted gas horizons in the Burbank area but this was not done due to costs involved. Storage of gas in depleted underground reservoirs, however, might be one method to take care of at least a part of excess gas production.

Another possibility is maintenance of pressure in an oil-producing horizon by recompressing gas produced with oil and returning the gas to the reservoir to maintain pressure. Two of the present outstanding examples of this practice are the Sugarland field in Texas and the New Burbank field in Oklahoma. The practice requires complete unit operation to be entirely successful. With great depths and high pressures the costs to maintain original reservoir pressures often are excessive. Under such con-

ditions it might be possible to permit the natural decline of a field to occur until the pressure has declined to about 2,000 pounds per square inch, at which time gas injection could be started to maintain this reservoir pressure. The scheme is not entirely practical for all fields under present operating conditions, but I believe it should receive further careful study and consideration.

Much progress has been accomplished through proper proration orders designed to conserve gas, and these orders, together with the technical advances to utilize gas energy to the fullest extent, have helped the situation of gas conservation in oil production considerably. It is my thought that even if we adopt other means of helping conserve gas and oil, this recognition of gas conservation in prorating oil production is fundamental, and certainly merits all the thought and study and support we can give it.

Conclusion

In conclusion, I have shown that conservation and proration, strictly as terms, have different meanings; conservation does not permit the escape of oil or gas without proper utilization, and proration simply means allocating to fields, leases, and wells on some equitable basis a proportion of daily allowable production.

Although the terms are different in meaning they are closely related in actual production of oil and gas. Most States base proration orders on the premise of preventing waste.

Proration is recognized generally as a necessity under present day conditions, both to the industry and to the public, and the main criticisms have not been directed to the principle of proration itself but to the difficulty of enforcing it properly one hundred per cent, and the lack of equity that often occurs in allocating production. These criticisms can and will be worked out in the future.

Beside helping prevent economic chaos in the industry, proration has brought to the forefront many of the problems dealing with increasing the percentage of ultimate recovery of oil—and we now are studying changes that occur in gas-oil ratios, bottom-hole pressures, and other factors that contribute to reservoir energy, and in turn to the ultimate production of oil and gas. The trend of thought is toward determining the most efficient rate of oil production from any particular field so as to use to the fullest extent energy forces in the gas cap above the oil, the gas in solution with the oil, and the water below the oil and prevent leaving large amounts of oil in the reservoir without any energy forces to move it to producing wells.

The necessity for the natural gas industry to continue its studies of oil and gas production from combination gas and oil wells is apparent—the increasing quantities of gas produced with oil keeps this before us. With drilling to deeper horizons, we find a large amount of gas in solution with

(Continued on page 408)

Natural Gas Meeting High Spot of Cleveland Convention

R. W. Hendee

NATURAL gas men in large numbers gathered in the ballroom of the Hotel Cleveland, Cleveland, Ohio, on September 27 to participate in the program of the Natural Gas Department during the annual convention. They were amply rewarded by one of the most interesting sessions of the entire convention.

Opening the meeting, George E. Welker, chairman of the department, pointed to the great progress the industry has made in the past year and reviewed the activities of the department. His address was published in the October issue of the MONTHLY.

Natural Gas Gains

Concrete evidence of the industry's progress was submitted by Herman Russell, president of the American Gas Association in a stimulating address. The natural gas industry, he stated, now outstrips the manufactured gas industry in point of sales and revenue. Total revenue of the natural gas industry, for the first six months of this year, he pointed out, was $247,000,000 as compared with $186,000,000 for the manufactured gas industry.

Mr. Russell also compared the natural gas industry sales with the electric industry. During 1936, he said, "natural gas increased in gross sales 10.2% over 1935; electric power industry revenues only increased 7.6%; domestic revenues from natural gas increased 5.8%; the electric revenues but 3.2%. Revenues from industrial use of natural gas were up 19.2%; electric consumption up 13%." From an energy standpoint, he declared, "the natural gas companies delivered to all classes of consumers four times as much energy as the total delivered by the electrical industry."

Alexander Forward, managing director of the Association, pointed to the great increase in Association activities related directly to the natural gas industry. He also expressed his appreciation for the fine work of the officers of the department during the year.

"The entire Pacific Coast domestic fuel situation is to be materially affected by extensive electric developments all along the coast," F. M. Banks, vice-president, Southern California Gas Company, Los Angeles, stated in his address entitled, "Meeting Competition." To meet this problem Mr. Banks recommended that the gas industry raise its standards of performance, convenience and modernity in appliances and convince the customer that these appliances embody the superiority of gas.

The proposed participation of the gas industry in the New York World's Fair in 1939 was described by William T. Rasch, president, American Gas Products Corp., New York, and president, A. G. A. E. M. Mr. Rasch urged the natural gas industry to get behind this project.

One of the outstanding addresses of the convention was that by A. A. Nichoson, The Texas Corporation, New York, who spoke on "2000 Years of Progressive Evolution of the Worker." In a scholarly manner, Mr. Nichoson discussed the rights and responsibilities of the worker. He asserted that "the ever-mounting standard of living and its attending benefits have come only through the medium of collective evolution, a proof of the theory that progress comes not through the attempt of labor to attain its objectives by seeking to destroy capital, but rather through a wholesome, joint effort on the part of both capital and labor to constantly improve their positions."

Taxation Discussed

The concluding address was an authoritative discussion of "Legislation and Taxation" by William A. Dougherty, Gas Companies Inc., New York. He painted a dark picture of State and Federal taxation, contending that the "upward curve continues beyond vision." The only solution, he said, is to arouse customers to the fact that they are the ones who must pay the taxes either in higher rates or poorer service so that governments no longer will have as a slogan—"There's nothing like gas for taxation."

Officers of the Natural Gas Department elected at this meeting are Robert W. Hendee, Colorado Interstate Gas Co., Colorado Springs, chairman, and Thomas R. Weymouth, Columbia Gas and Electric Corp., New York, vice-chairman.

New members of the Managing Committee were elected as follows: A. F. Bridge, Southern Counties Gas Company, Los Angeles; F. H. Brooks, Northern Natural Gas Company, Omaha; H. D. Hancock, Cities Service Co., New York; Elmer F. Schmidt, Lone Star Gas Company, Dallas; B. R. Bay, Panhandle Eastern Pipe Line Co., Kansas City; R. E. Wertz, Amarillo Gas Company, Amarillo; John J. McMahon, The East Ohio Gas Co., Cleveland; R. H. Hargrove, United Gas Public Service Co., Houston; D. W. Harris, Arkansas Natural Gas Co., Shreveport; and J. French Robinson, Peoples Natural Gas Co., Pittsburgh.

The Rate Structure Committee Rings a Bell

The following remarks concerning the work of the Rate Structure Committee were presented at the A. G. A. convention in Cleveland, September 30, by G. I. Vincent in the absence of the committee chairman, Robert E. Ginna. Mr. Vincent has been a member of the Rate Structure Committee since its formation and is a past chairman. The reports to which he refers may be obtained from Association headquarters.—Editor.

THE saddest thing for a speaker is to introduce his remarks with an apology. But it is only fair to tell you that I am pinch-hitting on short notice for my friend, your chairman of the Rate Structure Committee, Mr. Ginna of Rochester.

It is perhaps not unfortunate that I have been honored by the opportunity to stand for a few minutes in his shoes. Perhaps I can say some things at which, with pardonable modesty, he might have paused.

You know I am a sort of perennial member of your committee. I have watched, and, when I could, have participated in many of their activities. For the current report mine was much a listening part, therefore, I have more latitude now to say what I think. May I therefore touch very briefly the high spots of the past work of your committee?

Rate Making Defined

What is rate making anyhow? Is it anything more than the practical pricing of our product to the end that our customers will contentedly use more of it? You will find all that in the successive reports of your committee. You will find the answer to almost any rate problem. You will find how to build up a cost analysis. You will find how to formulate the ideal rate, and its practical variations. And if you and I have not always followed the best road toward the best pricing of our product,—well expediency is a nasty word but we all live with it. So there it all is, the last word. No, not the last word and now I'm back to Bob Ginna.

I think I can tell you what he was driving at by speaking parenthetically for a moment. Did we ever hear this? "I can't sell them on that rate." Did we believe it? If so what did we do about it? Did we accept it as the perfect alibi, or did we formulate a new price? And if so how? You know of course your values and your operating costs, and all the other things—except one. Do you know your market? And when Bob hurled that one into the assembled talent he, in my judgment, struck twelve. True, some one said is it our,—that is the Rate Committee's job? Maybe not, but I think it is. If it be indeed true that rate making is as I said a moment ago a practical pricing proposition, then surely the prospective market is of prime interest to the pricer.

So that, my friends, is the genesis of the 1937 report of your Rate Structure Committee. If you don't mind I won't read any of it, but I have a few suggestions. At the earliest opportunity turn to the first page and read the four numbered statements in italics. Then turn the page and read the concluding paragraph also in italics. For my part I would have changed the twice appearing word "should" in that last paragraph to "will." After you have read those two bits you will read the rest of the introduction—you just can't help it.

Then read Appendix I, the contribution of Messrs. Mettinet and Knowlton. Read every word of it. Then read it over again. It really isn't necessary for me to say that, you will anyhow. Then read Appendix II. I told you Bob was modest. It was his idea to put that in but you notice he doesn't say so.

Rate Prophets

Someone has wisely said there is no nourishment in qualifying as a prophet. All the prophet gets out of it is the opportunity to say, "I told you so" (always unpleasant) when practically everybody has forgotten what it was all about and if they remembered, they wouldn't care. But from time immemorial the man, who, wise and farsighted, could sense from current happenings what was likely to happen, and told it,—well he was usually abused because even the sketchiest thinkers were afraid that there might be something to it. Do you know that a long long time ago some then members of your rate committee did indeed qualify as prophets. What they said was something like this—"Make a *better* tool out of your rate," a *better* not necessarily a *lower* rate, although that would usually have been part of it, "and *use it,*" that is important—"Make a better rate tool and use it or else—." Why back in that time I know a chap who was called on the carpet and thoroughly dressed down for having the temerity to make a crack like that. Well, have we it somewhat with us right now, or haven't we?

I have another suggestion for you. It was touched on at our first general session but I repeat it because the obvious objective of your rate committee is distinctly parallel. If you have not read the several articles that have come out of the Rochester Company, get busy. The papers by your chairman and by our good president, Herman Russell, and by Joe Haftenkamp are classics.

My time is up. I seem to have occupied it in doing nothing myself and telling you to do a lot. If I've sounded mandatory, forgive me. I didn't mean it that way. After all we are all in the party together. And I venture one final thought. If you will follow the suggestions, if you will take a little time out and read this report and these articles, I somehow think you cannot fail to agree with me that someone, at long last, has rung a loud bell.

A Pertinent Message

AT one of the sessions of the Empire State Gas and Electric Association's annual convention at Saranac Inn on September 16 and 17, a message was submitted by President Russell, of the American Gas Association.

So much of importance was said in so few words that it is here repeated:

"My message will be brief.

"To the members of the gas industry—Where heat is required in the home and for many industrial and commercial uses, gas is a superior fuel from the standpoint of performance and cost. Every effort must be made to impress this fact upon the mind of the housewife, the business man and the general public. Use greater sales effort, more advertising, more publicity. Advertise the value of home cooked meals. Popularize home cooking. Replace old appliances with new. Sell hot water from a health and beauty standpoint. Improve your appliances. Spend money for research. Make your rate structures more promotional. Make the public gas minded.

"To those in the electric industry—Analyze your costs. Be sure you know what it costs to serve each kind of load. Go after that business which is definitely profitable. Avoid spending money to secure fuel business, especially domestic, at rates less than cost for the benefit of the manufacturer and at the expense of the customer and company. Develop the lighting and power load. Give particular attention to lighting, small appliances and refrigeration loads in the home. Do not be misled into thinking that low rates—particularly low domestic rates—will protect you against municipal ownership or political attack. They will not but are sure to result in demands from commercial and power customers for still lower rates.

"To both utility industries—This is no time for fighting. Sit down across the table and talk things over. Decide what is in the consumers' interest; in the company interest. Avoid those fields which can be better served by the other. There is plenty of business for both industries. Today all industries need to work together to solve common problems. This is especially true of those in the gas and electric utility business. Fighting among ourselves will only confuse the public, lower earnings, alarm our investors and hurt the market for our securities.

"LET'S WORK TOGETHER!"

Serving American Industry

By FRANK H. ADAMS

Vice-President and General Manager, Surface Combustion Corporation, Toledo, Ohio

Frank H. Adams

TO attempt, in a few moments, to sketch the highlights in the picture showing the position of the gas industry in serving American industry is, for me, a pleasant occasion. However, I approach it with a full appreciation of the difficulty of giving you, in a limited time, more than just the highlights in a complex field which has carried your service truly "Wherever heat is used in industry."

The simple facts alone show a picture in which we can all take pride and to which I can only add some details and explain some of the reasons for the accomplishment. Those basic facts are that as of June 30, 1937, you reported 957,000 industrial and commercial customers. This compared with 925,000 a year ago and less than half as many—452,000—in 1929.

Growth of Industrial Gas

The increase in sendout grew from 692,000,000 M cu.ft. in 1929 to 918,000,000 M cu.ft. for the year ending June 30, 1936 and to 1,065,000,000 M cu.ft. in the year ending June 30, 1937.

The revenue increased from $204,000,000 in 1929 to $232,000,000 in the year ending June 30, 1936 and to $263,000,000 for the year ending June 30, 1937.

These figures indicate an increase in the past year, as compared with 1929, of 110% in customers; 54% in sendout and 29% in revenue.

These figures alone show an accomplishment which represents the growth of your business in the industrial field. Of more importance, however, is the fact that it is the gauge of the acceptance by industry of your product—gas service. That growth rests on the sound foundation of service, economies and performance in keeping abreast of industry's production problems.

There are many reasons for the present position of gas in industry. Its acceptance as a preferred fuel, particularly in all process work and heat treating, has grown with every refinement in production methods where uniformity and controllability have been of ever increasing importance.

The manufacturing industry—whether food, clothing, agriculture, automotive, steel, glass or railroad—today could not operate with the efficiency they do without gas. In many of the industries they would have great difficulty in operating to their present standards of quality with anything like the same overall economy.

Gas Wins Acclaim

Industry's progress, in giving better quality, performance and value at ever lower prices, is, of course, a part of an industrial philosophy in which America has been a world leader and with which you are all familiar. Your record is consistent with that philosophy as the comparison of the ratio of sendout to the revenue vividly shows.

Gas has won its place in this picture and has been an important factor in the progress made because it met two requirements.

First—as industry has refined its processes, increased its production, improved its materials and metallurgy, higher standards of uniform and dependable heating performance have been necessary. Gas-fired equipment has met these standards.

Second—gas also has those inherent qualities and added values in processes where the chemical and metallurgical reactions of the gas with the product are an integral and important part of the process, as in carburizing and bright annealing. Here again we find gas is the dependable servant in producing these atmospheres.

We can take almost any industry and trace the romance and accomplishment which give adequate reason for industry's acceptance of gas service as it has met their requirements. For example, in the steel industry the comparatively recent drastic change to the continuous mill is one of the direct causes for all heating operations to go so predominately to gas. When 80 individual hand mills, each one subject to the variables of 16 individuals, are replaced by one continuous mill a new standard is born. It is significant that the steel industry turned to gas when determined not to lose the uniformity and quality gained in the continuous rolling operation.

The control panel of a modern battery of soaking pits as compared with the miscellaneous collection of hand-operated dampers, gas and air controls, dramatizes in itself the use of a fuel which permits the uniformity of heating and control of the atmosphere to meet the requirements of the present day mill.

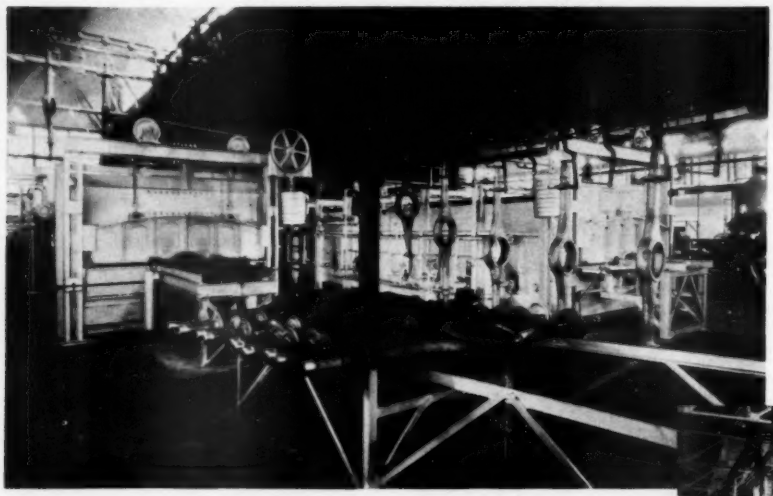
The gas-fired slab furnace, the next reheating step after the soaking pit, has evolved from a single-stage manually operated furnace into an automatic unit in which two to three zones are separately maintained both as to temperature and atmosphere. These modern furnaces permit 40% to 65% increase in tonnage and fuel efficiency from 20% to 35% better than former furnaces.

Radiant Tube Heating

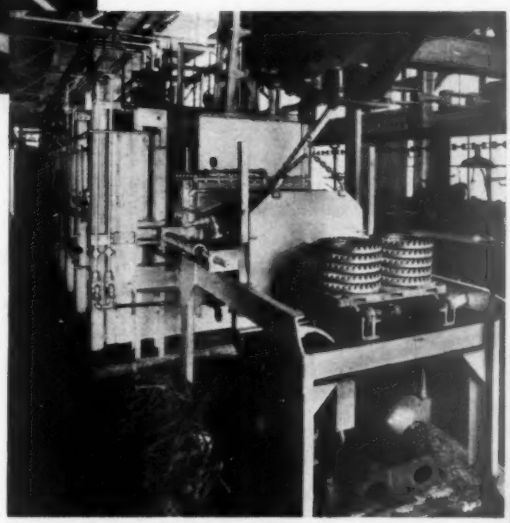
In the annealing operation we have a fine example of the comparative strength and adaptability of gas. I wonder how many of you fully appreciate the significance of the development of what is properly termed the "Radiant Tube" system of heating. To you it is an alloy pipe placed on the walls of a furnace similar to an electric element—a tube with a gas flame throughout the greater part of its length. That is what it is to you. To the electric man it is a 6" or 8" heating element, gas-fired.

The steel industry, prior to the advent of radiant tubes, had recognized the necessity for the uniform anneal

Address before A. G. A. convention, Cleveland, Ohio, September 28, 1937.



Continuous gas-fired hardening and drawing furnaces for rear axle housings



Prepared atmosphere-type continuous gas-fired carburizing furnace

which fixed radiant temperature zones, permitted and had even started in with bell covers using electric elements for these great tonnages. The gas-fired radiant tube with no limitations on the heavy heating up demands, with their ability to maintain the temperature gradients essential to uniform heating during long annealing cycles and their full automatic control, met instantaneous acceptance by the steel industry. Not only has there been this improvement in the process requirements but it has meant a possible saving of over $2 per ton of annealed sheets. When you visualize that the ordinary size furnace handles 40 to 50 tons of sheets you can see that the savings of $100 per heat is a credit to gas in this type of application.

Gas in Automotive Field

In the automotive industry the first problem in the pioneer days was in changing a wagon builder's trade over to a machine production art. Fifteen years ago a conventional automobile weighed 6500 pounds and was equipped with a 50 HP motor. Today we put a 125 HP motor in a 3000 pound car. This evolution was in the main a metallurgical problem. The treatment of the alloy steels, the processes of carburizing and bright annealing, air drawing the carbon steels, the short cycle malleableizing for the malleable castings, even such details as the bright annealing of non-ferrous metal which permits the drawing of fine tubing, all played a major part in this modernization. Many phases of the development of these processes are directly attributable to gas. Gas has not only made many of these processes possible, but it has also fitted in directly with the reduction in cost that the 15 year old car represents as compared to the modern car. Probably the most fundamental advance in the history of metallurgy was made possible by the opportune development of controlled gas atmospheres now so prevalent in the heat treatment of steel.

Formerly it was necessary, after heat treatment, to remove scale either by sand blasting or pickling and allow for proper tolerances. We now take the part direct from the furnace to the assembly line. The work, finally machined, is heat-treated without scale or decarburization. Many times the savings in pickling and rehandling are far in excess of the entire fuel costs. It is significant that all of these atmospheres, regardless of the fuel used in the furnace for heating, depend on gas as their source.

In the vitreous enameling field the fact that no products of combustion can be present in the furnace atmosphere has made gas firing difficult. Now the radiant tube has furnished the ideal answer to this problem of utilization. During the past year 24 installations of this type have been made. In the radiant tube application to the continuous enameling furnaces, tubes over 90′ in length have been applied in which the combustion gases, after generating the temperature necessary for the firing zone, go successively through the preheat zone and the dryer. Such applications practically put gas on an even B.t.u. footing with electricity and still possesses all the advantages of the indirect radiant form of heating. A reduction in operating cost of a large continuous furnace from $5.15 per hour on 92¢/KWH electricity to $1.35 per hour on 30¢ natural gas and a 43% increase in production indicates both the accomplishment and the reason for acceptance of gas.

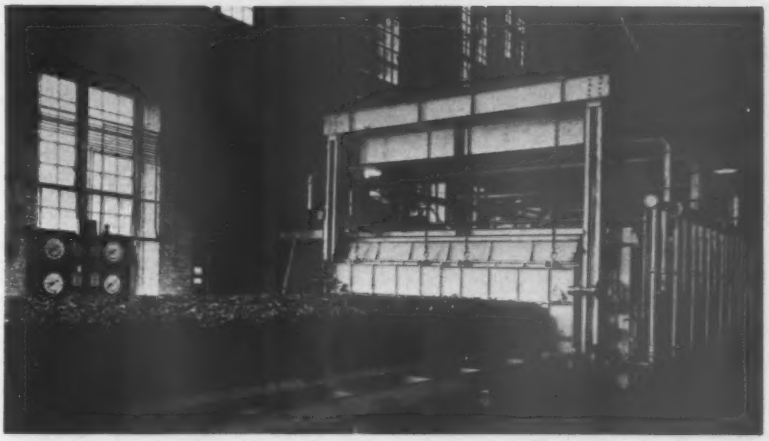
In the malleableizing industry here again radiant tubes, which permit the use of controlled atmospheres, have reduced the heat treating cycle from 80 hours to 30½ hours, eliminated packing parts in boxes and pots, no dirt, no decarburization—a superior product at a saving of $2.25 per ton.

Uniform heating of densely packed parts in the low temperature range up to 1000° is attained in a most startling manner by recirculation and convected heat. This principle has almost displaced former designs in the drawing operation after hardening, and has proven an equally important factor in the glass industry in the natural gas territory. Direct-fired annealing lehrs using convected heating represent a radical departure from the old indirect-fired lehrs which were usually fired on oil and have surpassed most of the advantages claimed for the electric lehr. The present day lehrs have in some instances reduced the annealing cycle from 12 hours to 3 hours and have given a correspondingly increased production combined with an absolute accurate control.

Romance of Gas

In the above examples I have attempted to give you, of necessity, only an example of those changes in industry due to the utilization of gas which to me dramatizes the position of gas in industry and represents the romance of accomplishment. Is it any wonder that gas service has won its lasting place in industry? It seems to me that the more recent developments of atmosphere control, radiant tube heating and convected heating represent substantial extensions of the already broad foundation upon which rests the position of gas in industry. It is important to appreciate that these technical advances are not applicable just to the examples I have cited, but represent broad principles which will find their use and value in every industry using heating processes.

The important fact is that we are dealing with a fuel that has the versatility and other qualities which permit its adaptation in an ever widening circle of influence to the requirements of industry. This trend to gas is your greatest sales asset—the practical operating evaluation by industry of your product. They have quickly appreciated and evaluated these plus values as there has been placed in their hands utilization equipment which delivers those plus values day after day. Industry recognizes their worth. You can take pride and confidence in the fact that the growth in customers and load proves their worth has been fully realized.



A batch-type controlled atmosphere malleableizing furnace heated by means of gas-fired radiant tube heating elements

Against that background of sound performance and acceptance let me take just a few moments to analyze some phases of your competition. I cannot become seriously disturbed over the apparent self hypnosis of the electrical industry which leads them to the conclusion that any field is theirs, if it can be served electrically; that aggressive salesmanship can displace sound customer economics. The seriousness of it must be measured in terms of its effect on our own aggressiveness rather than the competitive merits of our service.

Fuel Cost Minor Factor

In most cases, about the only significance the loss of an industrial load to electricity means to me is that fuel cost is the least important factor in the operation. We have probably failed in salesmanship even with due allowance for mechanical and utilization competitive factors. Fifteen years ago the industrial heating field was headed towards electricity with considerable momentum. The electrical industry had all the encouragement and resources of their fine work in the industrial power field. In spite of the gas industry's lack of trained salesmen, proper utilization equipment and with an inferiority complex in sales aggressiveness, we see today's picture in which gas has won its place on the basis of sound and outstanding service.

By virtue of what record, public acceptance, performance or novelty which you cannot duplicate or do better do you think any serious inroads can be made in the domestic field? In the cooking field the present saturation of the field with obsolete equipment is one of your major problems. You have not made the necessary progress in displacing these old ranges with modern ranges. Aren't you leaving it to the electrical industries to do that? It is their biggest sales opportunity. Why isn't it yours?

The electrical industry does not consider operating cost the dominate factor in competition. They think they can sell new values in the home which makes the higher costs acceptable just as a more expensive value in transportation with the automobile competes with the street car. So the competition is not in product so much as in sales methods and viewpoint. If you are going to sell on the level of price, you leave the door wide open for their competition to drive through on more acceptable concepts of value.

Your progress in the industrial field has been made by selling values which justify higher price. Isn't this the same principle the electrical industry is and always has followed? Doesn't it apply equally to your domestic competition today? This, I think, is the major lesson to be learned from your accomplishment in industry.

Let's look at another development coming up over the industrial horizon —the gas engine for power generation. The electrical industry has never shown any tender solicitude for the gas industry in their competition for load.

(Continued on page 407)

Bernard J. Mullaney Retires November 1

B. J. Mullaney

B. J. MULLANEY, an outstanding figure in the gas industry for the past twenty years, retires from active business life on November 1, when his resignation as a vice-president of The Peoples Gas Light and Coke Company of Chicago becomes effective.

Mr. Mullaney has been a member of the Executive Board of the American Gas Association since 1922. He was president of the Association in 1929-1930, after having been vice-president from 1927 to 1929. He was present at the first annual convention of the Association in 1919, and in that year helped to inaugurate systematic Association attention to advertising and publicity.

Active in A. G. A. Affairs

From that time forward Mr. Mullaney's interest in the Association caused him to devote to it an increasing amount of time and attention, up to the end of his last term as a director. It is doubtless a fact that there has not been a more active or constructive supporter of Association activities. With few exceptions, whenever a committee was formed to undertake some important activity for the gas industry, Mr. Mullaney's name was among the first to be included. His record of achievements is notable and his loss to the industry will be keenly felt.

The story of his activity for and with the Association closely parallels the story of his work for The Peoples Gas Light and Coke Company. Coming to the company in 1917, he was appointed director of public relations in 1919, and was elected vice-president in charge of industrial relations in 1924.

Coming to the service of his company and the industry when he was in the prime of life, he brought to his work a breadth of experience in the public and industrial relations field which made his work of unusual value.

After working as a farm hand and as a rural district school teacher in New York State, where he was born, in Woodhull, he went to Minneapolis and shortly entered newspaper work. After a few years in Minneapolis and Saint Paul, he moved to Chicago where he became successively reporter, editorial executive and political editor of the *Chicago Herald* (subsequently *Times-Herald* and *Record-Herald*). He left newspaper work after 16 years of experience to enter the advertising field, in which he spent the years from 1903 to 1916, punctuated by four years of service as secretary to the Mayor of Chicago and as Commissioner of Public Works for the City.

With the entrance of the United States in the World War, Mr. Mullaney became publicity director for the Illinois Council of Defense, and shortly after the close of the war he entered the service of the Peoples Company.

During his gas utility career, he found time for many outside activities of a civic nature. He was a member of the Chicago Association of Commerce, which he served as vice-president, Chairman of its Ways and Means Committee which conducts the weekly luncheon meetings, member of the Executive Committee and of the Senior Council, and chairman of the General Publicity committee. He was also a member of the Illinois Public Utilities Association, serving it as president from 1932 to 1935, and of the Illinois Manufacturers' Association, of which he was chairman of the public relations committee from 1933 to 1937. During the past twenty years he has written and spoken much on advertising, publicity, industrial relations and public relations.

Mr. and Mrs. Mullaney will spend the winter in southern California, and some time in the late spring will probably go to France for a time, where Mrs. Mullaney has a home in the Paris suburb of Chantilly.

Industry's Leaders Pay Tribute to Mr. Mullaney's Service

No phase of the gas industry could fail to suffer a loss by Mr. Mullaney's retirement for there is no phase of it to which he has not made lasting and constructive contribution. But while he may plan in good faith to retire, I predict that wherever in future there may be need for him there Mullaney will be found, retirement or not. —W. W. WINTER, President, Atlanta Gas Light Co., Atlanta, Ga.

More than anyone else, I have been in position to observe and evaluate the outstanding services rendered to the gas industry by Mr. Mullaney. Every request for his assistance in any branch of the Association's work has met with cheerful, instant acceptance, and without exception he has done these innumerable jobs with thoroughness, tact, fidelity, and outstanding ability. Whether as President or in the ranks, his talents have been at the service of the gas industry so long that the future without him means serious loss. He carries with him into his retirement not only the gratitude of those for whom and with whom he has labored, but countless genuine friendships that will be his always. —ALEXANDER FORWARD, Managing Director, American Gas Association.

Through Mr. Mullaney's retirement our Laboratories lose the active support of one of their best friends and the industry one of its most forceful and able leaders. He has probably done more to bring about successful cooperation between naturally opposing interests, created better understanding of the Laboratories' purposes and developed effective ways and means for utilizing their work in promoting the sale of gas and gas appliances than any other one man in the gas business. Undoubtedly the success which our Association's testing and approval program has attained can be attributed in a large measure to his foresight, sound judgment and guiding genius. —R. M. CONNER, Director, A. G. A. Testing Laboratories, Cleveland, Ohio.

Few men can retire with a better deserved consciousness of good work well and faithfully done. Barney Mullaney brought to the gas industry an invaluable perspective—that of seeing ourselves as others see us. He has contributed a quality of intense humanness, not in the least incompatible with his fine personal character, high ideals and ability in organization.

More than any other individual he has helped the industry to express itself in terms understood by the public. His inspiration to the rank and file of the industry and his interpretations of the important work performed by each has promoted personal satisfaction and better service. In all of this he has never lost faith and courage, joined with enthusiastic persistency.—W. H. HODGE, Manager, Sales and Advertising Division, Public Utility Engineering and Service Corporation, Chicago, Ill.

No man has contributed more to the development, protection and growth of the gas industry through activity in the American Gas Association than has our old friend and fellow worker Barney Mullaney. He may retire from active service in the industry and in this Association, but he can never retire from the grateful memory and high personal regard of his friends and associates in this work so long as one of them remains alive.

The national advertising campaign now under way owes much of its widely acclaimed success to Mr. Mullaney's interest and energy.—JAMES F. POLLARD, President, Seattle Gas Company, Seattle, Wash.

The retirement of Mr. Mullaney removes from the active scene one of the most prominent and well-liked figures in the utility field. Fortunately, it brings no severance of the ties which bind him to his host of friends, associates and co-workers.

In whatever capacity he served, whether in his company or in the Association, he never compromised his intellectual integrity, he never sacrificed principle to expediency. Fearless and outspoken, no one was in doubt as to where he stood on any subject. The gas industry has cause to be grateful that through long years of stress and strain it has had such a constant and undaunted champion.

And now that he has chosen to withdraw from active service and enjoy a well-earned retirement, our universal good wishes go with him. May the years ahead be solaced by "rural quiet, friendship, books," and whatever else his heart desires.—OSCAR H. FOGG, Vice-Chairman, Consolidated Edison Co. of New York, New York, N. Y.

In relinquishing his duties, Mr. Mullaney carries with him into retirement the best wishes of scores of co-workers and friends both inside and outside the gas industry. His devotion to the American Gas Association and its activities needs no extended comment by me. You will find it recorded in the gas trade papers, the A. G. A. MONTHLY, and many committee reports. Within recent years his efforts in behalf of the Testing Laboratories and particularly the promotional opportunities existing in the more effective use of the Laboratory Approval Seal have been of incalculable benefit to the industry. To the younger men in our business who must carry on our work, the career of Mr. Mullaney merits study and emulation. By dint of his own personal efforts and tremendous energy, he won his way to the top, retaining old friendships and adding scores of new ones.—HERMAN RUSSELL, President, Rochester Gas & Electric Corporation, Rochester, N. Y.

The retirement of B. J. Mullaney from active service as vice-president of The Peoples Gas Light and Coke Company of Chicago brings to a close one of the outstanding careers of the American gas industry.

As president of the American Gas Association in 1929-30, vice-president in 1927-29, and a member of the executive board since 1922, Mr. Mullaney has been consistently and effectively on the side of progress in the industry. The record shows his active participation in the first annual convention of the Public Utilities Advertising Association in 1919, at which time he helped to inaugurate systematic attention on the part of the A. G. A. toward advertising and publicity. The current great national advertising campaign of the association, for example, was brought into being in no small degree by Mr. Mullaney's vision and energy.

All of us who have been associated with Mr. Mullaney will keenly feel his absence from our councils, and the industry, as a whole, must go on without one of its acknowledged leaders.—N. C. MCGOWEN, President, American Gas Association.

Rochester Chorus Scores Hit

Frank Houston leading the Rochester chorus at the Cleveland convention

HIGHLIGHT of the entertainment program at the annual convention in Cleveland was the concert presented by the Rochester Gas and Electric Men's Chorus during the evening general session, September 29. Not only did this remarkable chorus hold its audience spellbound with a diversified program of song but it also presented an A. G. A. song which was the hit of the convention. The words of the song are significant:

"Give us some men, who are gas-minded men
Who will fight for the sales that we need
Gas-minded men are the right kind of men
To maintain our new pace-setting speed.
Oh! Bigger and better
Each one a go-getter
They'll grow as they make people heed
For there's nothing in the world
Can halt us or dismay,
When gas-minded men together work for A. G. A."

(Words are by Arthur P. Kelly of the Rochester company and the tune is "Stout Hearted Men." Used by permission of Harms, Inc.)

The Rochester chorus, now entering its seventh year of singing, has an enviable reputation. In the past six years it has appeared before more than 100 groups, with a combined audience of over 50,000 persons, not including radio broadcasting. It was organized by Frank Houston, manager of merchandising sales, and is composed entirely of employees of the company. From a group who sang merely for their own amusement, they have become a singing organization in great demand.

The chorus has had the enthusiastic support of President Herman Russell.

A. G. A. Convention in Pictures

The truth of that old proverb, "a picture is worth a thousand words," is again emphasized in these informal photographs taken during the sessions of the nineteenth annual convention in Cleveland.

(All candid camera photographs in this issue are by A. Gordon King, A. G. A. staff)

President Herman Russell, Major Forward, George F. Mitchell and George A. Ranney

W. C. Beckjord, New York, R. B. Brown, Milwaukee, and W. J. Troeller, Jr., Elizabeth

Breakfast meeting of committee to consider coordination of national advertising, B. J. Mullaney, chairman

Dwight J. Baum, New York

Dana D. Barnum, Boston

N. C. McGowen, Shreveport, newly elected president

Treasurer Joseph F. Rooney, New York

J. D. von Maur, Toronto

Typical scene at registration desk

E. H. Poe, Mrs. Cyril B. Smith and George W. Bean

Major Forward and President Russell

C. C. Young and Mary A. Crosson

James F. Pollard, Seattle

Group including K. R. Knapp, C. C. Winterstein, Ed. Gamble, R. H. Maurer, Walter Lean, J. R. Wohrley, J. B. McNary, N. F. Reif, and E. A. Munyan

Fred A. Miller, Bradford, and J. D. Creveling, New York

Thomas, Cleveland Press staff photographer, snapping notables

President Russell and George E. Welker, chairman, Natural Gas Dept.

R. M. Conner, director, A. G. A. Laboratories, and President Russell

Double exposure—Fred A. Miller, J. D. Creveling and L. B. Denning

Hon. Harold Burton, Mayor of Cleveland

Convention Briefs

Any industry that fails to carry forward an adequate program of research—both applied and pure—is on the road to oblivion. The marked improvement in domestic and industrial gas appliances in the last three or four years has been largely due to the research work carried on by the American Gas Association through able committees directing the work.

—Herman Russell

National advertising, like Providence, helps only those who help themselves.

—Walter C. Beckjord

The labor policy of any company, whether it be good or bad, is, like the institution itself, the reflection of—the lengthened shadow of—one man, and the administration of that policy depends upon his ability through organization, training and selection to have it understood and functionalized in his company.

—T. H. A. Tiedemann

The Certified Economy Range will be our leader in the cooking struggle. It will be the attraction for the customer's eye. It will get us attention, build prestige and make the public realize that gas cooking is definitely modern.

—Hugh H. Cuthrell

Showmanship, as its essence, deliberately reverses the time-honored advertising habit of boasting publicly about one's own goods and sets out to interest and entertain the customer in terms of his excellence.

—K. M. Goode

Studies made in some five widely scattered towns of various sizes show that 50% of the customers have decreased their use of gas, yet 50% of all the decrease is occurring among only 10% of the customers.

A replacement gas range does not decrease the load—there is a slight increase of 500 cu.ft. per year per replacement range.

—Hall M. Henry

In personal contact alone lies the first secret of all successful dealer relations work.

—D. A. Strickland

Viewing the future with optimism, we realize that well organized, properly supervised dealer cooperation programs mean better trade, improved customer relations and increased gas sales.

—T. J. Gallagher

To avoid competing with dealers' salesmen, and to make the field more remunerative to justify proper coverage by dealers, our company makes practically no direct sales of hotel and restaurant equipment.

—W. M. Jacobs

The subject of appliance needs cannot be divorced from the subject of appliance merchandising. Both are tied hand in hand, and any discussion of appliances which ignores their merchandising would appear to be a waste of time.

—Henry O. Loebell

You have a wonderful record of achievement which is more a credit to the intrinsic values of your product than to your planning and salesmanship. Bring the latter up to the standard of the former and the future will bring you much to be proud of.

—Frank H. Adams

It is just as important for you to inventory your selling practices as it is for you to inventory your physical properties to find out where you are today. There has been a lot of product redesigning but there has been altogether too little redesigning of selling methods.

People want to do business with personalities; they want to do business humanly. The great trouble with this whole utility field is that it preferred to remain an abstraction. Here is a great opportunity from the standpoint of public and labor relations.

—Gerald E. Stedman

The gas industry as far as fuel appliances are concerned is in just as good a condition as the appliances of any competing fuel industry. The progress which has been made by the manufacturers in design, efficiency, and appearance of their appliances in the last three years is, we feel, far ahead of the progress made by competing fuel manufacturers.

—William T. Rasch

We are on the verge of both technical and promotional accomplishments never dreamed of a few years ago, provided we have the courage and tenacity to demand of ourselves the best.

—F. M. Banks

Gas fuel is not only holding its place in the industrial field but is handling the major portion of that added heating load in industry which is for refinement and betterment of product and is displacing other fuels rapidly in all kinds of applications.

—Ralph L. Manier

The first requisite of a successful scrubbing process is that the equilibrium conditions must be correct; that is, the constituent to be removed from the gas must be highly soluble in the liquid used and the other constituents of the gas must be highly insoluble.

—Prof. C. C. Furnas

Gas immersion coils can be readily placed in tanks also equipped with steam coils, and thereby offer an ideal method of securing the summer water heating load where winter water heating is by steam from a heating boiler.

—Lawrence E. Biemiller

The use of natural gas as a fuel for the larger boilers and steam generators is becoming greater each year and, as installations are made, many interesting discoveries have been made as to the action of gas as a fuel.

—L. S. Reagan

It is only recently that proper attention has been given to and value placed upon the heat losses through furnace walls and floors for boiler furnaces. There has been considerable advancement in the design of air-cooled wall construction but ordinarily this is rather high priced and complicated for use in the smaller gas conversions.

—W. W. German

Air conditioning with gas is better because the humidity and temperature may be controlled more accurately and economically with gas-fired equipment than with any other method. The inherent features of both direct dehumidifiers and gas engine-driven refrigeration compressors make this possible.

—L. A. Bickel

There has been a marked trend in the past few years to develop within home service departments, ways and means of cooperating in utility sales and load building programs. Home service workers are recognized as possessing definite advantages in dealing with the homemaker.

—Elizabeth Sweeney

The most satisfactory method for meeting the normal desire for advancement, in a mutually beneficial way, is the adoption of a wage incentive plan. This should make it possible to insure a well-trained, contented, experienced group of employees.

—J. J. Natale

We believe that the practice of averaging bills may be successfully adopted. However, the success of the practice is dependent upon the thorough education of the employees concerned in the methods to be followed in each step of the procedure and under no circumstance should the impression be given that payment of an averaged bill is compulsory.

—E. F. Embree

In any company industrial relations program, the first requisite is a clear statement of the purposes and objectives of the company in relation to all matters affecting employees, their wages, conditions of employment, relations with management, and additional privileges that go along with continuous service. As one authority on industrial relations expressed it recently, "The employees should know from their own management the rules of the game in the enterprise in which they are engaged."

—Eric A. Nicol

The beneficial effects of training appear not only in improved performance but in increased safety on the job. This is naturally so, because correct methods of working are also safe methods of working. A man cannot possibly disregard safety when he is doing a job correctly.

—Dr. Morris S. Viteles

Policies of selling and experimentation on new applications of gas for industrial purposes have borne fruit to the extent that the next few years will see a marked increase in industrial gas sales.

—Albert A. Schuetz

The length of time gas engines have been operating satisfactorily certainly establishes the fact that heavy duty gas engines are a reliable and economical source of power. Gas engine power plants that have operated satisfactorily for a period of from fifteen to twenty-five years are not unusual.

—E. J. Hatzenbuehler

The standing of gas as a production agent among the men who are responsible for keeping up the production levels in American and Canadian factories is probably higher today than it has ever been previously.

—J. P. Leinroth

Not only does the continuing battle of the industrial and commercial fuels necessitate a continuing publicity offensive, but such special situations as arise in individual industries require special publicity by gas companies and equipment manufacturers affected, and also special publicity by the Association, conceived and executed along broad industry lines and directed through the technical and news channels of the industries in question.

—Henry Obermeyer

During the 1937 flood, vigilance of the Cincinnati gas department paid enormous dividends not only in the small amount of property damaged but in the excellent good will created by being the only utility operating at normal capacity during the flood.

—E. A. Munyan

Lacking the auspices of any large manufacturing industry or organization within or without the gas industry to carry on continued organized research, many projects of a research nature must be continued and others initiated by the Distribution Committee working in the Technical Section of the American Gas Association.

—D. P. Hartson

Cathodic Protection may be applied to isolated transmission lines, or pipe lines which do not involve other underground structures. In city distribution systems Cathodic Protection may be applied successfully only in special cases and where proper consideration has been given to all the factors involved.

—A. V. Smith

Tests of the corrodibility of a large variety of metals in soils have progressed sufficiently to permit one to specify, in a general way, the types of pipe materials which are best adapted to certain soil conditions.

—Dr. Scott Ewing

The complete removal of sulfur from fuels is neither feasible nor practicable at the present time. The substitution of corrosive resistant materials for the susceptible ones now used in the construction of equipment and flue conduits is one possible method of solving the corrosion problem.

—Louis Shnidman

Herman Russell, president of the Association, is shown presenting the Charles A. Munroe Award to George Wehrle, Public Service Company of Colorado, who was judged to have made the most outstanding contribution to the gas industry during the year. At the right, Elmer F. Schuldt, The Peoples Gas Light and Coke Company, is pictured receiving the Beal Medal from Ernest R. Acker, president, Central Hudson Gas and Electric Corporation, for contributing the best technical paper to Association meetings

A. G. A. Approval Seal Promoted as Investment in Confidence

By CARTER McFARLAND
Washington Gas Light Co.

CONVINCED that confidence is the vital buying factor—as much for gas appliances as for a physician's services—Washington Gas Light Company recently took steps to engender confidence in its appliance-buying public. How? By promoting the gas industry's $7,000,000 investment in confidence, the A. G. A. Laboratories' Seal of Approval.

The medium it selected was its monthly calendar bill-insert which it uses to convey to its consumers short, concise, institutional stories on the high-points of gas service. The story of the Seal, a voluntary investment by the Gas Industry to improve gas service, fitted well into this type of promotion, and was a potent hook upon which to hang an institutional message. Following is the copy which told Washingtonians the story of the Seal:

It's the Confident Thing To Do

Almost every woman (and man, too), has her "favorite store" where she does most of her shopping. Why? Because she likes the people there, trusts their advice and knows she is getting "her money's worth" in what she buys. In short, she patronizes her favorite store because she has confidence in it.

That's just the reason—to assure you of confidence well placed—that the American Gas Industry has invested over seven million dollars in the past twelve years to make gas appliances a "good buy."

The American Gas Association's great laboratories were founded as one of the first great national testing and research organizations. In these laboratories the gas appliances of progressive manufacturers in the United States are put through rigid and painstaking tests of every description—to determine efficiency, durability, convenience. So thorough are the tests that every flaw in construction is brought to light before the appliance is put on the market. And only after every flaw is corrected by the manufacturer is the Laboratory Seal of Approval put on the appliance.

Because of this huge investment of money and care the American Gas Association Seal of Approval means something to you. It is this great Industry's pledge of faith to you—it is your assurance that gas appliances bearing it are "good buys," offering you the best that money can buy and science can perfect in economy, efficiency, modernity and safety.

Whether you do your shopping for gas appliances at this Company or at your favorite appliance dealer, look for the American Gas Association Seal of Approval—at this sign you can buy with CONFIDENCE!

The powerful appeal which Washington Gas Light has built up in this unique calendar insert, with its artistic photograph on the front and "Recipe of the Month" on the back, is demonstrated by the results from a recent "test" which was given the medium. In August part of the insert was in the form of a return post card and recipients were asked to jot down on the card whether or not they liked the calendars and also any suggestions they might have for its improvement. In answer Washington gas-users sent in a virtual flood of enthusiastic replies. As this is written, over 8,000 "yeas" have been received and they are still coming in at the rate of 25 per day. On one day the return soared to 397. This large and voluntary response (nothing was offered those who answered) is a striking index of the effectiveness of the piece as a good will medium.

Promotion of the Seal, directly to its consumers through one of its strongest mediums, is an accurate indication of the faith Washington Gas Light Company has in the Seal and its promotional possibilities.

Gas Fuel—Let's Boost It*

By A. F. RICE
Manager, Market Development, Southern California Gas Company

A. F. Rice

THE men in the electric industry, as well as in ours, think and act selfishly to better their own interests. No matter how selfish electric competitors may be, the very nature of their organization impels them to industry-wide thoughts; whereas similar organizations in our industry think within the well-defined limits of their specific businesses; for instance, they think about gas pipe and the pipe business; gas meters and the meter business; gas ranges and the range business; not of gas and the gas industry as a whole. We have no single manufacturer whose individual, selfish interest threads through every phase of the gas equipment and appliance business.

The result of the difference in organization is that electric competition is integrated and coordinated, and these benefits spring from the selfish-interest element and not because electric men are more original in thinking than men in our business.

We cannot be charged with disintegration or discordance or disorganization, because, from an industry standpoint, never yet have we accomplished complete integration, coordination, or organization. These premises are wrong, if the following challenges can be answered:

What manufacturer of gas generating equipment or gas transmission pipe ever consistently donated a part of his profit in the form of paid-for space in a national periodical such as *The Saturday Evening Post*, telling how proud he was that he could play a part in either the manufacturing or conveying of this marvelous, superior, clean, economical fuel for public use?

What manufacturer of gas ranges has ever made it a regular practice to tell a story of the value of gas water heating, space heating, or refrigeration either in his catalogs or folders, or has educated his salesmen in the value of this correlated gas service to sustain not only his business now but gas service in the future?

What water heater manufacturer has ever given gas cooking any sales publicity?

What gas meter manufacturer has ever made any appeal to the public to consider the finest fuel on earth, gas, as the preferred fuel for domestic use?

What manufacturer of any gas equipment or appliance consistently finds room in his sales materials, advertising, or verbal appeals for a few words of commendation for gas itself as a fuel?

These things are being done every day by the "all lines" national manufacturers of electric equipment and appliances, and to a lesser extent by the manufacturers of electric all-appliance lines.

Until these things become commonplace practices in our business, we cannot hope to affect public opinion as favorably as our competitor who does them consistently—and in a manner disregarded by the gas industry.

The only thing that can affect public opinion is what the public is told and how it is presented. Electric competition tells its story far and wide in strident tones that are being heard. Our story must be told equally well, not by one but by all branches of our industry.

* Extract from address before Pacific Coast Gas Association, August 17-19, Seattle, Washington.

How America Cooks

Of the
30,000,000 families in the United States:
15,000,000 families cook with gas
8,000,000 families cook with coal and wood
6,000,000 families cook with oil
1,000,000 families cook with electricity

Personal and Otherwise

T. N. McCarter Honored on 70th Anniversary

Thomas N. McCarter

DIRECTORS of Public Service Corporation of New Jersey and subsidiary operating companies gave a luncheon October 19 in honor of the seventieth birthday anniversary of Thomas N. McCarter, president of the Public Service companies. Mr. McCarter was born October 20, 1867. The luncheon was held at the Essex Club, Newark.

In the business world, Mr. McCarter enjoys the distinction not only of being one of the founders of Public Service, organized in 1903, but of being the only president the company has ever had. In this respect Mr. McCarter is believed to occupy a unique position among the country's industries. The directors at the annual meeting last April elected him chief for the thirty-fifth consecutive time.

Also, last April, the directors by resolution waived, in Mr. McCarter's case, the provision making retirement at seventy compulsory. The sense of that resolution was that Mr. McCarter's usefulness to the company was too valuable to be dispensed with. The directors of Fidelity Union Trust Company took a similar action with reference to Mr. McCarter's retirement from their board, of which he is chairman.

Mr. McCarter is well known in the utility field by reason of his identification with the American Gas Association and other national associations, in which he has been active for many years. He is the donor of the McCarter Medal which has been awarded to many employees in the gas industry for outstanding acts of life saving by the prone pressure method of resuscitation. He was the first president of the Edison Electric Institute and served two terms in that capacity. Also he has been president of the American Electric Railway Association.

Receive McCarter Awards

WILLIAM P. WITTER, an appliance inspector in the customers' service department of The Philadelphia Gas Works Company, and John P. Gormley, supervisor of the same department, were presented with a McCarter Medal and Certificate of Assistance respectively on October 19. The presentations were made by Conrad N. Lauer, president of the company.

The awards were made to Witter and Gormley for performing meritorious acts of life saving by the Schafer prone pressure method of resuscitation. The acts for which they were singularly honored occurred on March 19, 1937. Witter, with the assistance of Gormley, revived a woman who had been overcome by gas in her kitchen.

J. L. Stone Transferred to Danbury Company

JAMES L. STONE, for fourteen years chief executive of the Spokane Gas and Fuel Company, Spokane, Wash., has become vice-president and general manager of the Danbury and Bethel Gas and Electric Light Co., which serves an important manufacturing district in Connecticut.

Mr. Stone is highly respected on the Pacific Coast, where he served as president of the Pacific Coast Gas Association in 1932.

Frank A. Woodworth, of the New York office of Cities Service Company, will succeed Mr. Stone as general manager of the Spokane company.

Joins Treadway

ROBERT H. TREADWAY, who has completed his course in Mechanical Engineering at the University of Michigan, has become associated with A. A. Treadway, Inc., of Detroit, sales engineers of industrial heating equipment.

Smith Elected Chairman of Middle West Corp.

DANIEL C. GREEN has resigned as president and director of the Middle West Corporation and Purcell L. Smith has been elected a director and chairman of the board to succeed Mr. Green as chief executive officer.

Mr. Smith has been vice-president in charge of finances for the Commonwealth Edison Company. Prior to coming to Commonwealth Edison, four years ago, he had been assistant vice-president of the National City Bank of New York and vice-president and treasurer of the Illinois Power and Light Company.

Mr. Green has been president of Middle West Corporation since it was formed in November, 1935, as successor to Middle West Utilities Company.

Merrill N. Davis Elected A. G. A. E. M. President

Merrill Davis

THE second annual meeting of the Association of Gas Appliance and Equipment Manufacturers was held at the Hotel Statler, Cleveland, Ohio, on September 27.

Merrill N. Davis, executive vice-president, S. R. Dresser Manufacturing Co., Bradford, Pa., was elected president of the association. E. R. Guyer, vice-president, Cribben and Sexton Co., Chicago, was elected vice-president.

Speakers at the meeting included W. T. Rasch, retiring president, A. G. A. E. M.; Herman Russell, president, American Gas Association; Alexander Forward, managing director, A. G. A.; Donald McDonald, treasurer, A. G. A. E. M.; George E. Frazer, counsel, A. G. A. E. M., and H. N. Ramsey, chairman, Gas Water Heater Division, A. G. A. E. M.

Heads Stone & Webster Co.

JOHN R. LOTZ was elected president of Stone & Webster Engineering Corporation, October 20, to succeed James H. Manning who has retired to devote his time to personal affairs. Mr. Lotz has been associated with Stone and Webster for thirty years, the last seven as excutive vice-president.

H. Roy Black Joins Knoxville Co.

ANYBODY who thinks that gas consumption in the United States is decreasing as a result of progress made by other fuels will not think so long after they meet H. Roy Black, newly appointed commercial and industrial engineer for the Knoxville Gas Company.

Mr. Black, who came to Knoxville from Johnson City, Tenn., where he was sales manager of the Washington County Gas Co., has great faith in the future of the gas industry, based on his experience in compiling an enviable sales record with modern gas appliances. His experience includes many applications of gas in both the industrial and commercial field and he asserts that gas is becoming universally more acceptable.

Mr. Black's appointment was announced by H. G. Bonner, general manager, and C. W. Gale, sales manager. He entered the utility field in 1915.

Special Rate Plan Data Are Available

THERE is available for review, at Association headquarters, a newspaper-page-size volume of Special Rate Plan Publicity Data. The information pertains to promotional rate advertising campaigns and is of interest to commercial, advertising, and rate men. The material was assembled at the suggestion of R. E. Ginna, chairman of the 1937 Rate Structure Committee, and is a pictorial follow-up of a report of the 1936 Rate Structure Committee, prepared by A. I. Phillips, on "Special Rate Plans and Rate Applications" (Objective Rates, Profit-Sharing Rates, Service-at-cost Rates, etc.)

The companies in the above report, and a few others, are represented by as much material as was available and in several important cases, where a set of the material was not received, references are made to where they may be seen or through whom they may be borrowed; in some instances such data are in the same building as Association headquarters.

In addition to copies of advertisements, news editorial comments, samples of bill forms, letters to customers, etc., there is also filed, for convenient reference, the correspondence with each of the contributing companies. These letters present some statistics and throw additional light upon the plans.

Among the many companies reported are the Southern California Gas Company, the Wisconsin Public Service Corporation, the Florida Public Service Company, the Broad River Power Company (now the South Carolina Electric & Gas Co.), the Concord & Kannapolis Gas Company and the North Carolina Gas Company.

Cooking with Gas a "Gay Adventure"

FINDING a new copy approach or theme in the advertising of gas cooking and modern gas ranges is no sinecure. It sometimes happens, however. Bozell & Jacobs, Inc. of Omaha, Nebraska, the advertising agency which serves the Metropolitan Utilities District, has produced a mailing piece of real merit.

"Cooking Is a Gay Adventure with a Modern Gas Range," is the dominant theme emphasized in the piece. The brief text reads as follows:

"How do you feel about cooking? Is it a gay adventure or is it just a distasteful daily task that your good sense and circumstance requires to be done well? If you don't enjoy cooking there may be a very important reason. Even the most enthusiastic cook can scarcely get a kick out of preparing meals on an out-of-date range. It's no fun . . . . but it *can* be! Nothing is so essential to charm and beauty as a truly congenial kitchen atmosphere. Years will rest lightly on your shoulders if you have beautiful modern cooking equipment. Curiously enough, a modern, time-releasing gas range is actually one of the chief aids to lasting attractiveness. That's why we suggest that you examine the new gas ranges . . . . which enable you to prepare delicious meals . . . . make a relaxing, stimulating adventure out of the hours you spend in the kitchen."

The broadside described here is a four-page affair, the inside pages of which carry copy on the themes "Gas cooking is cheaper —faster—more flexible," and "Dinner cooks while you're away." Some of the photographs used are those made available as tie-in items with the gas industry's national advertising program.

New officers and directors of the Gas Meters Association of Florida and Georgia, elected at the recent annual meeting: Left to right, bottom row—J. G. Altick, Savannah; R. O. Berry, Jacksonville, secretary-treasurer; J. W. Owen, Winter Haven, president; C. J. Noda, St. Augustine, vice-president; R. F. Daugherty, Savannah; Top row—A. J. Lawlor, Bardenton; C. D. Littlefield, Miami Beach; L. J. Sullivan, Orlando; Ted Bergman, Lakeland, and Virgil W. Kennedy, Orlando

A. G. A. and Pacific Coast Group in Closer Tie-up

A PLAN has been developed and is now pending final approval which will bring about closer affiliation of the Pacific Coast Gas Association and the American Gas Association. All members of the Pacific Coast association will become members of the A. G. A., but the P. C. G. A. will retain full autonomy as to all matters of local interest in that territory. Thus an undivided front will be presented by all Pacific Coast companies in national as well as local affairs affecting the gas industry.

Wisconsin Public Service Wins Safety Trophy

EMPLOYEES of Wisconsin Public Service Corporation were honored at the National Safety Congress in Kansas City October 14 when Governor Harold G. Hoffman of New Jersey presented representatives of the corporation with the National Safety Council trophy for the best safety record among combination gas and electric utilities in the United States.

During the period of the contest, July 1, 1936, to June 30, 1937, fourteen hundred employees of the corporation worked over three million hours with only seven lost time accidents. Eight months out of the period were completed without a single lost time accident.

This is the third time Wisconsin Public Service employees have received the national safety award, having won the trophy in 1930 and 1932.

Fire Prevention Booklet

A NEW booklet "Preventing Welding and Cutting Fires," just published, should be useful to all those interested in welding or cutting operations.

The booklet is an important part of the nation-wide program to promote safe practices among the users of industrial equipment. It includes safe and sure rules to follow for preventing the possibility of welding or cutting fires, as well as other pertinent information.

Copies of this booklet may be obtained free upon request to any office of The Linde Air Products Company, New York, and principal cities.

Portfolio Stimulates Gas Dealer Tie-In

GAS appliance dealers of Portland, Ore., and surrounding territory were told, by means of an attractive portfolio, the story of Portland Gas & Coke Company's August and September newspaper campaign in time to tie in any advertisements of their own.

Included in the portfolio were advance proofs, a complete schedule for the entire series and a reproduction of a page from one of the local papers showing how six gas furnace dealers had taken advantage of a large ad on house heating by purchasing space on the same page.

All of the company ads featured gas service rather than any trade names of appliances, making the set-up ideal for the various dealers to tie in. The ads, varying

in size from 2 col. x 3" to 6 col. x 15", were scheduled in Portland metropolitan papers and 32 dailies and weeklies in other communities served by the Portland utility. The program was one of the most complete ever launched in the territory on gas service.

Dealers also were urged to tie in by means of window and floor displays, thereby taking advantage of both the newspaper campaign and the American Gas Association's campaign in the national magazines.

In the back of the portfolio a pocket was utilized for distributing several pamphlets and other current promotional pieces.

U. S. Bureau Dedicates New Building

THE new building of the Petroleum Experiment Station of the United States Bureau of Mines at Bartlesville, Oklahoma, was dedicated on October 19 and 20. The Bartlesville Chamber of Commerce cooperated in an extensive program to mark the dedication as a memorable occasion.

The station at Bartlesville was founded in 1917, and since that time several hundred reports dealing with all branches of the petroleum and natural gas industries have been published by the Bureau of Mines. These reports include studies of the problems involved in drilling and production, transportation, refining and chemistry, and the use of oil and gas and their products. Particular emphasis is laid on reduction of waste, on safety and efficiency, and on economic development.

The new building, which was completed early this year, contains the administrative offices, library, and chemical laboratories of the station. The laboratories are well designed and equipped for distillation of petroleum and for physical and chemical determinations on oils, gases, and oil-field waters. The library has 5,000 volumes devoted to petroleum, natural gas, helium, oil shale, and allied substances, and dealing with their geology, development and production, chemistry and refining, and economics. Visitors who wish to use the facilities of technical references are welcome in the library reading room.

Personnel Practices Receive Attention at Convention

E. A. Nichol

IN recent years enlightened employers and employees have tried to find ways and means of adjusting their mutual relationship by methods consistent with sound economics, humanity and common sense. That this is especially true in the gas industry was amply demonstrated at the annual A. G. A. convention in Cleveland, where a number of speakers devoted their attention to industrial relations and personnel practices.

An important address on "Executive Responsibility for Industrial Relations," was presented at the final general session, September 30, by T. H. A. Tiedemann, Industrial Relations Counselors, Inc., New York. In addition there was an exhaustive analysis of industrial relations presented before the Natural Gas Department by A. A. Nichoson, The Texas Corporation, New York, in a paper entitled "2000 Years of Progressive Evolution of the Worker." A number of committee reports before sectional meetings, notably the Accounting Section, were also devoted to problems of employee relations.

A special luncheon conference on personnel practices was held September 28 at the Hotel Statler, Cleveland, with E. A. Nichol, chairman of the Committee on Personnel Practices, presiding. The principal speaker was V. W. Conover, personnel management of the United Steel Corporation.

Gas Picture Contest

A NOVEL contest for amateur photographers among gas customers has been started by the advertising department of the Lone Star Gas System. Reversing the usual order of such competitions, the project does not require contestants to purchase merchandise or write an essay about a product; the company will buy from its customers 100 good photographs of gas heating equipment entered in the contest. A total of $1,250 in prizes will be awarded.

The contest opened October 11 and closes December 18. The company will pay $10 each for the ten best photos submitted each week during the 10-week competition. At the end of the ten weeks' period grand prizes of $100, $75, $50, and $25 will be awarded for the best entries submitted during the contest. The idea was proposed by Willard G. Wiegel, advertising manager.

New Industrial Groups Join A. S. A.

DANA D. BARNUM, president of the American Standards Association, announced at a meeting of the board of directors in New York, October 6, that eleven new industrial groups have joined the association since last March. This brings the basic membership of the A. S. A. to a total of 70 national organizations—trade associations, including the American Gas Association, technical societies and departments of the Federal government.

Mr. Barnum is a past president of the American Gas Association and recently resigned as president of the Boston Consolidated Gas Company to become a gas utility consultant.

Progress Under Protest

(From *Reader's Digest*, October, 1937)

OBJECTORS to the use of gas for lighting declared it would deprive Britannia of her ability to rule the waves, because by eliminating whale-oil lamps it would destroy the whaling industry, the nursery whence Britain drew sailors for her fighting ships.

It was argued in 1833 that Philadelphia should continue to be lit with oil, because discharges from the gas works into the surrounding waters might drive away the shad and herring.

Dismissal-Compensation Plans

A RECENT survey by the National Industrial Conference Board indicates that there are at least 93 companies having formal plans under which extra compensation is given to workers whose services are no longer required. There are in addition 60 companies with plans of an informal character under which similar compensation is given in special cases on the basis of need or merit. Nineteen other plans were operative during the depression but have been discontinued.

During the seven-year period from 1930 to 1936, twenty-five companies with formal plans paid out a total of $5,286,820 to 12,180 displaced workers. The largest sum was expended in 1933, when 5,054 discharged employees received $2,073,966 in benefits.

An analysis of the formal dismissal-compensation plans in the Conference Board's study states that 27 of these plans provide for uniform payments while 66 plans provide for a scale of payments graduated in accordance with the length of the retired worker's period of service with the company and his age. The former type of plan is in most cases restricted to salaried employees and the most common amount of dismissal compensation is two weeks' pay. Graduated plans are more frequently applicable to wage earners as well as to salaried workers, and provide a more liberal scale of dismissal compensation. Of the 66 graduated plans 11 provide for the payment of one week's pay for each year of service.

William H. Pettes Dies

WILLIAM H. PETTES, who at the time of his retirement on pension, December 31, 1936, was general auditor, gas, Public Service Electric and Gas Company, died October 9 at his home in Fairhaven, N. J. He was seventy years old and had been with Public Service and predecessor companies thirty-six years.

Mr. Pettes was chairman of the Accounting Section of the American Gas Association in 1921. He organized and was president of the New Jersey Gas Association in 1911.

In February, 1890, Mr. Pettes entered the utility business with the United Gas Improvement Company at Vicksburg, Miss. Seven years later he was made a traveling auditor for the U. G. I., and in 1900 became auditor of the Essex and Hudson Gas Company, a predecessor company of Public Service.

In 1903, when Public Service Corporation of New Jersey was formed, Mr. Pettes was made general agent of the Corporation and in 1907, general auditor of the gas department. He became general auditor of Public Service Gas Company in 1909, and when Public Service Electric and Gas Company was formed in 1924 he was named general auditor, gas department, of that company.

Donald McDonald Is Dead

Donald McDonald

DONALD McDONALD, secretary-treasurer and a director of the American Meter Company, died October 8, in New York City. He was sixty-eight years old, a native of Albany, N. Y.

Mr. McDonald's grandfather founded D. McDonald & Co., a gas meter factory, at Albany, in 1855. The business was carried on by Mr. McDonald's father, William, and he himself entered it at the age of 17. He became manager of the factory in 1912.

D. McDonald & Co. having become a part of the American Meter Company in 1913, Mr. McDonald came to New York in 1919 as general superintendent of the meter company.

He became secretary and a director of the company in 1922, and in 1936, treasurer as well.

He was a director of the American Gas Association in 1924 and 1925, and served at other times on the advisory council, safety council, entertainment committee, and the special committee to establish a testing laboratory in Cleveland. He was president of the Society of Gas Lighting in 1932 and 1933, on the governing board of the Gas Appliances Institute about the same time and chairman of the Gas Apparatus and Accessories Institute under the NRA.

A. G. A. E. M. Incorporator

One of the incorporators of the Association of Gas Appliance and Equipment Manufacturers, he served as its first treasurer and was a member of its executive committee. He was the author of a number of technical papers on gas meters.

While in Albany Mr. McDonald had served as president of the Chamber of Commerce, president of the Albany and Fort Orange Clubs, civil service commissioner, vice president of the New York State National Bank and a director of the Union Trust Company. During the World War he served as military census director of Albany County and as New York State chairman of the Second Red Cross War Fund.

Mr. McDonald represented his company on the New York Board of Trade, Merchants Association of New York and United States Chamber of Commerce.

Pacific Coast Gas Association

PRESIDENT Norman R. McKee of the Pacific Coast Gas Association has selected Wednesday and Thursday, December 15 and 16, as the dates for the Fall Conference in San Francisco. In making the selection he was guided by the fact that on December 17 the Pacific Gas and Electric Company is holding a huge company sales meeting which will bring to the city a great many important members from that organization's far-flung divisions. All of the association's sections have been invited to participate in a program designed to afford an opportunity for the discussion of both completed work and studies in progress, and for the organization of new committees by the section chairmen who recently took office.

Next Convention in Atlantic City

THE twentieth annual convention of the American Gas Association will be held in Atlantic City, N. J., the week of October 10, 1938.

Convention Calendar

NOVEMBER

9-12 **American Petroleum Institute**
Stevens Hotel, Chicago, Ill.

10-13 **17th Annual Gas School Conference**
Iowa State College, Ames, Iowa

15-17 **National Bureau of Standards**
Washington, D. C.

15-19 **National Hotel Association***
New York, N. Y.

17-19 **American Institute of Chemical Engineers**
St. Louis, Mo.

19 **New England Gas Association**
Industrial Division
University Club, Boston, Mass.

DECEMBER

6-7 **National Industrial Council**
Waldorf Astoria Hotel, New York, N. Y.

8-9 **National Association of Manufacturers**
Waldorf Astoria Hotel, New York, N. Y.

6-10 **American Society of Mechanical Engineers**
New York, N. Y.

6-11 **Exposition of Chemical Industries**
Grand Central Palace, New York, N. Y.

15-16 **Pacific Coast Gas Association, Fall Conference**
San Francisco, Calif.

1938

JANUARY

24-28 **5th International Heating & Ventilating Exposition***
Grand Central Palace, New York, N. Y.

FEBRUARY

16-18 **Southern Gas Association**
Dallas, Texas

24-25 **New England Gas Association**
Hotel Statler, Boston, Mass.

MARCH

16-17 **American Association of Petroleum Geologists**
Roosevelt Hotel, New Orleans, La.

APRIL

13-15 **National Petroleum Association**
Cleveland, Ohio

17-21 **American Chemical Society**
Dallas, Texas

MAY

2-5 **U. S. Chamber of Commerce**
Washington, D. C.

* Includes exhibit sponsored by A. G. A Industrial Gas Section.

Accounting Section

D. H. Mitchell, Chairman H. W. Hartman, Secretary H. A. Ehrmann, Vice-Chairman

Animated Discussion Features Accounting Sessions During Annual Convention

MORE than living up to an enviable reputation for spirited and forthright meetings, the accountants at the annual convention of the Association in Cleveland participated in two lively and informative sessions in addition to a series of luncheon conferences. Led by Herbert E. Cliff, chairman of the section, the meetings focused attention on a wide variety of accounting and office management problems.

On Tuesday afternoon, September 28, the meetings were given a fine start by the brief, pithy, and capable address of Chairman Cliff. In his opening remarks the chairman expressed appreciation for the splendid cooperation of the committee chairmen and members in carrying out the program of this year, and paid tribute to the progressive spirit of the section's work.

New Officers

The report of the Nominating Committee, which followed, presented D. H. Mitchell, Northern Indiana Public Service Co., and H. A. Ehrmann, Consolidated Edison Company of New York, Inc., for the posts of section chairman and vice-chairman respectively. The nominations were approved and the proposed officers were unanimously elected to serve for the coming year.

The Luncheon Conference Committee report was then presented by its chairman, G. B. Webber, Public Service Electric and Gas Co. It was pointed out that the luncheon conferences had been so enthusiastically attended in the past that the size of the conference groups might become a problem in the near future. This was amply demonstrated by the large attendance at all luncheons the following day.

J. Gordon Ross, Rochester Gas and Electric Corp., chairman of the Customer Relations Committee, presented a paper urging the group to "Organize for Better Service." This report, like those presented by H. L. Griffith, Chairman of the Uniform Classification of Accounts Committee, and H. L. Gruehn, Chairman of the General Accounting Committee, evoked lively discussion from the floor.

Some of the important work carried on during the year by the Uniform Classification of Accounts Committee was outlined, and the belief was expressed that by the militant and persistent efforts of the committee in the future there lay promise of further success.

Chairman Herbert E. Cliff in action. At the left is Paul Ryan, A. G. A. statistician

A few of the more pertinent accounting problems considered throughout the year at conferences sponsored by the General Accounting Committee were brought before the section by the chairman of this committee. The committee's symposium method of carrying on its activities was highly commended, and the discussion of the accounting problems presented was animated.

The Tuesday session was closed with the report of P. J. Sweenie, Chairman of the Exhibit Committee, who called attention to the accounting machine and other exhibits on display.

The final session of the Accounting Section on Thursday afternoon was initiated by the Accounting Machines Committee, whose chairman, G. F. Trexler, presented a report on "Merchandise Accounting by Machine." Discussion of the machine methods proposed was lively and interruption by the chairman was necessary in order that the report of the Office Management Committee, which followed, might be presented on schedule.

J. J. Natale, chairman of the Office Management Committee, presented the first of the committee's activities—a report on "Wage Incentive Plans." The report outlined the uses to which such plans were being put throughout the industry and some of the advantages and disadvantages to be expected. The report was well received and thoroughly discussed.

A talk was then given by Dr. W. J. McConnell, assistant medical director of the Metropolitan Life Insurance Co., on "Health Promotion Plans for Clerical Workers." Briefly Dr. McConnell sketched the growth of industrial medicine, stressed the losses sustained by industry as the result of the common cold and other ailments, and suggested some of the preventative steps that industry and the individual might take in curtailing or avoiding losses due to illness.

Adherence to schedule made it again necessary to cut short the stimulating discussion of the reports of the Customer Accounting Committee which followed. This committee, headed by W. E. Scott, chairman, presented three reports, the first of which, entitled "Averaged Bills—Their Advantages and Disadvantages" and outlined by E. F. Embree, New Haven Gas Light Co., evoked considerable interest and constructive criticism. The second and third reports, "Advantages of a Complete Customer's History Record" and "Disadvantages of a Complete Customer's History Record," were presented by F. C. Reel, United Fuel Gas Co., and G. I. Simpson, The Peoples Gas Light and Coke Co. The controversial nature of the presentations was interesting and effective, and the lively discussion which featured both meetings of the Section was maintained to the close of the program.

In closing the meetings and pronouncing the Benediction, H. C. Davidson, Consolidated Edison Company of New York, Inc., paid tribute to the memory of the late Henry M. Brundage, and reviewed briefly the work of the Section during the past year. Attention was called to the ability and leadership which had been demonstrated by the retiring section chairman in carrying out the section program, and he received a rising vote of thanks as the sessions came to a close.

Conference Committee Goes Poetic

GEORGE B. WEBBER of Public Service Electric and Gas Company, chairman of the Accounting Section Luncheon Conference Committee, adopted the very unusual procedure of submitting his committee report to the Accounting Section in the form of a poem entitled "O Come, Come, Come to the Luncheon Conferences!"

In this hotel tomorrow noon at promptly
12:15,

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Commercial Section

Hugh Cuthrell, Chairman J. W. West, Jr., Secretary F. X. Mettenet, Vice-Chairman

"The Road Back"

Hall M. Henry

● **Digest of address by HALL M. HENRY, Utility Management Corp., New York, N. Y.**

Herewith are presented abstracts of some of the important papers presented before the Commercial Section during the A. G. A. convention in Cleveland, Ohio, September 27-October 1. Under the chairmanship of F. M. Banks, Los Angeles, the sessions were outstanding in the history of the Association. Particularly noteworthy was the panel discussion on September 29 led by B. A. Seiple, which included papers by C. A. Nash, Elizabeth Sweeney, H. E. Dexter, W. E. McCreery, and N. T. Sellman. A highly informative address, by H. O. Loebell on "Gas Appliance Needs of the Industry," before the session, September 30, will be published in the December issue of the MONTHLY.

OUR manufactured gas companies' net revenues have fallen on the average, 35% from those prevailing in 1931. We can only progress on "The Road Back" by eliminating some kind of competitive fuel. Hence it means a fight to the finish to get back on our higher earning level.

The following plan, designed to accomplish this objective, is the result of a ten-month study by a committee composed of: R. J. Rutherford, F. M. Houston, I. Lundguard, E. E. Linburg, F. S. Hoefer, R. E. Keefe, Harry Mandel, J. I. Gorton, W. F. Moses, E. L. Wilder, Hall M. Henry, chairman, (advisory) L. D. West, Dr. Daniel Starch, A. M. Beebee, J. S. Avery.

The Plan

THE OBJECTIVE: The objective of this plan is to bring the Net Earnings of each Gas Company up to the *level* of 1931—in *three* years.

THE PROGRAM: The plan will be known as the 3-R Program.

The First R—Stands for RETENTION—and signifies we propose to do something about our present loads. We do not intend to sit idly by and watch 50% of our customers decrease their use of Gas—with 10% of them accounting for half of our decline. The attacks of our competitors and the inroads being made by the Bakery—Cannery—Restaurant—Laundry, etc., will no longer go unchallenged. We feel that little real progress can be made on "The Road Back" until we have fortified our present position and protected it from further attack. It is recommended this be done:

FIRST: Through an aggressive drive to replace the old inefficient gas appliances with modern efficient time-saving ones—

SECOND: By correcting faulty water heating installations—and we still have many of these—

THIRD: Through personal contact by specially trained customer representatives (Home Service or Home Economists, call them what you will). At least one representative for every 3,000 domestic Gas customers.

We have too long neglected our cooking and water heating loads—even our House Heating customers. We apparently have gone on the premise that once our customer, always our customer. Our policy needs to be changed to one which recognizes the principle "Our customer with proper care and attention, anyone's customer with neglect."

We have seen what has happened to our several types of loads through lack of proper safeguards, but surely we do not need to continue to make the same mistake. Selling new appliances alone is not sufficient to increase our sendout and revenues. The following table shows the per cent of customers sold new appliances and under "A" the amount of increase that should have taken place, whereas "B" shows the actual increase. You may well question the estimates for increases. We did and therefore made a check of the bills of customers before and after, and found our estimated increases were actually taking place. The reason our average customer consumption did not respond was because of the decreases. Hence we need to do something about the Retention of our Gas loads.

% of Domestic Customers Sold Various Appliances.	A Estimated Annual Increase per Domestic Customer from Appliances Sold.	B Actual Annual Increase per Domestic Customer.
Company A		
19% Water Heaters 14% Ranges 1% Gas Refrigerators	2500 cu.ft.	800 cu.ft.
Company B		
2.1% Water Heaters 6.7% Ranges 1.9% Refrigerators	752 cu.ft.	200 cu.ft.
Company C		
14% Water Heaters 20.2% Ranges 3.5% Refrigerators	3250 cu.ft.	500 cu.ft. decrease

Personnel Needed for Retention

We propose to assign the job of RETAINING present loads to some one person whose *first and primary* duty it is to *protect* our Revenues. The job of Retention will be distinct from the job of getting new loads. It is true they supplement each other, but the personnel required for each job must be trained differently.

The job of the RETENTION personnel is to watch carefully the bills of customers who have, say, automatic Gas Water Heaters—to see that a falling off in consumption is not due to something which may cause complete or partial discontinuance of our service. The RETENTION personnel will see that our customers continue to enjoy the benefits their gas appliances are designed to give them.

This personnel will point out other benefits not now enjoyed by the customer. They will see that our customers know about the improvements in Gas appliances, and not judge gas solely from the obsolete appliance she may be using. They will stress the value to the customer of doing more of her "Home Making." How through the use of modern gas appliances, she may earn an average of $1.00 per hour doing her home making and save as much as $150 to $200 per year, if she will do her complete Home Making. They will make liberal distribution of the comparisons of costs of buying various foods vs. preparing them in the customer's own home, using such data as prepared by "The Borsodi School of Living," and such data as will be developed in the future by this school and which will be sponsored by a nationally known publishing house.

The Second R—Stands for RECOVERY. It is believed that many of the water heat-

Prominent Commercial Section speakers at the convention. Left to right: Hugh Cuthrell, newly elected chairman; F. M. Banks, retiring chairman; N. T. Sellman, Consolidated Edison Co. of New York; Dean A. Strickland, United Gas System, Houston, and H. E. Dexter, Central Hudson Gas and Electric Corp., Poughkeepsie

ers which are on our lines and are not being used at all, or only part time, represent a real opportunity to recover some lost revenues.

For instance, in one town the following results were obtained:

Heaters inspected	178
Heaters in full use	7
Heaters—revamped	178
Cost of revamping	$4,895.00
Cost per heater	27.50
Amount of revenue recovered	3,164.00

In this particular instance the Company decided to stand the entire cost of relocating heaters—running small copper tubing and even replacing old inefficient heaters free or at cost. It is believed a similar program can be carried on at a lower cost through having the customer pay a part of the expense.

Recovery of Dead Services

Included in this RECOVERY program is to be a determined drive on Dead Services or on loads lost to competitors. A study of the number of services indicates some 10 to 12% are dead, representing a promising field of endeavor. In attacking this problem we will need to have data on the comparative costs of cooking by gas, coal, oil and electricity.

We have some accumulated data made in homes of customers where the same menus were cooked for a week on one competitive fuel and a week on gas. These data show a wide variation in the amounts of gas used to cook the same quantity of food—and indicates the need for educating our customers in the proper use of our fuel.

In Worcester, Mass., we are advised they have found many of their combination range users who formerly used coal in winter and gas in summer—and who have had their coal range converted to oil—are now using oil twelve months and the reason given is that when they try to go back to gas they burn up a lot of food. This company has now assigned two girls to contact these combination range users and re-educate them on how to use gas. These company representatives have been trained to cook on non-heat controlled ranges because most of these are poor customers with obsolete ranges, non-heat controlled, and no immediate prospects for a modern one.

We simply cite these instances to point the need for an organized effort on the Recovery of lost loads. We believe once this job of Recovery has been assigned as a definite responsibility, many new and novel ways of recovering lost loads will show up. The Recovery Program will be carried out by the Customer Representative (Home Service or Home Economists) previously referred to, thus leaving the salesman free to concentrate on sales.

The Third "R"—stands for REPLACEMENT of Obsolete Gas appliances for *Protection* and REPLACEMENT of Competitive products for *Increased Revenue.*

Replacement for Protection

We can no longer neglect the REPLACEMENT of the out-moded, inefficient, obsolete gas appliances which are on our lines to the extent of 80% to 90%. Our competitors fully appreciate the importance of keeping the appliances that are interpreting *their product* up-to-date and modern in every respect. Thus it is we find the electric utilities already making a determined drive to replace the old, slow out-moded electric ranges with modern *fast efficient* units; even the electric range manufacturer appreciates the importance of this replacement program and is willing to reduce the price on his range to former range users, to speed this replacement program. This is also true of certain electric refrigerator manufacturers. Hence, a most important part of any Gas Program looking to the present and future of our business must include a consistent and thorough drive on replacing obsolete gas appliances.

The Customer Representatives (Home Service or Home Economists) previously referred to will do all they can to educate the customer on what a modern gas appliance will do for her—but, it is up to the salesman to see that the customer actually owns one. In many instances the replacement of an old inefficient gas appliance will result in a decrease in revenue. However, it appears (if we can rely on studies made in some six different towns of the gas bills of customers *before* and *after* a new gas range replaced an old range) there are many customers who increase their use and their increases offset the decreases with the result there is an actual increase of around 500 cu.ft./yr./range sold that replaces another gas range. It is true there are decreases, but apparently the increases offset the decreases and the net effect is an actual increase. Hence, again, if this holds true for all of our companies the replacement of obsolete gas ranges serves a two-fold purpose.

1st—Protection of the Cooking Load
2d—Brings added revenue to the company

Replacement for New Revenue

The Replacement of competitive fuels by gas is our *primary* means of obtaining revenue. We may be able to secure some added revenue through the *increased use* of the gas appliances on our lines, yet our *basic* means of increasing our loads remains as it has from the start, namely, the substitution of gas for some other method of cooking, water heating, refrigeration, house heating, etc. Hence, any load building program must recognize the highly *competitive* nature of our business. We must realize that the market for our product is also the market for a number of competitive products.

Hence, If we want to Get Back on the Road to increased earnings through the replacement of competitive products we need to attack this phase of our program with far greater sales effort than has characterized our feeble attempts to date. We have underestimated our competitors and failed miserably in the matter of *matching* Salesman power, advertising, showmanship and market research. If we are to recover our former earning postion, we will have to set a *real objective* and then supply the needed salesman-power, advertising, etc., needed to reach this objective.

What Should Be Our Objective

Is it too much to set as our objective the Recovery in three years of the amount of net revenue lost during the past 6 years?

Or is three years too long a period to take to get back to our former earning positions? The starting point on "The Road Back" is the setting of a definite objective or goal. Our companies' objective is to reach our 1931 earning position by 1941 through New Business efforts alone. Any economy in operating expenses will add still further to the earnings.

(Mr. Henry's complete report applies the 3-R program to a typical company with interesting results.)

The Association's Home Planning Program

● **Digest of address by JOHN F. QUINLAN, Director, Home Appliance Planning Bureau, American Gas Association.**

J. F. Quinlan

WE of the American gas industry are about to launch a nationwide home-building program. We have before us a definite market. Within the next year there will be approximately 300,000 new homes built in the United States and literally thousands modernized. Every one of these homes will require some form of equipment for cooking, water heating, refrigeration, home heating and conditioning, laundry equipment and so forth—a substantial piece of business indeed. Who is going to get it? We alone are not aware of its existence. There is a definite job, therefore, before us—a job that is focused upon the American home.

This job represents a challenge to the gas industry's resourcefulness. To meet this challenge, on May 1 of this year our Association's Home Appliance Planning Bureau was organized. This bureau is fostering an intense program of activity which will center upon architects, builders, the utilities, and through the latter, the general public in numerous communities.

Architectural Contest

It was considered desirable that our first attack should be upon the architectural profession in the form of a nationwide architectural contest with attractive cash prizes for winning designs. This contest will stress the theme, "Use Gas for All 4—Cooking, Hot Water, Heating and Conditioning, Refrigeration." It is tentatively planned that a contemporary problem in planning (1) a complete neighborhood, (2) a complete house within the neighborhood, (3) a complete gas installation, including kitchen and heater room, within the house —be made the basis of the contest. Identical prizes will be awarded to all major winners instead of the customary graduated prizes, thus making the contest more appealing to competitors.

The contest will be announced in the leading architectural magazines. An issue of *The Architectural Forum*, which is cooperating in the program, will carry a large section devoted to technical description of equipment sponsored by equipment manufacturers. The contest program and this section will then be bound as a book, a copy of which will be distributed to every architect in the United States, thus automatically placing in every architect's office a complete and useful guide to gas equipment installations which will be available for daily reference in executing house plans and specifications. A complete issue of *The Architectural Forum* will also be published devoted chiefly to the results of this competition.

A further contest will also be held, open to builders and their architects who during the calendar year 1938 actually build and equip two or more houses conforming to at least minimum gas equipment specifications established in the architectural contest. By synchronized announcement of the architectural and builders' contests at this time, it is believed that many of the houses erected next year will be adequately gas equipped and thus be eligible for awards. Another issue of *The Architectural Forum* will be devoted to the results of this competition.

As the final stage of this program, a number of the houses which win prizes in the 1938 builders contest will be reproduced full size at the 1939 New York World's Fair. This will serve as a fitting climax to the program and will be certain to attract maximum attention from the millions who attend the Fair.

That part of the program featuring the builders' contest will provide us with a number of newly constructed gas-equipped homes. Builders will be required under the rules of the program to maintain these homes for local demonstration, thus providing an opportunity for thousands of people to see the latest and best service and equipment which the gas industry provides. In addition, it is our plan to organize the country through the medium of our operating companies, and others interested, with the purpose of obtaining hundreds of additional homes for demonstration purposes. Appropriate literature will be sent to all member companies by January 1 outlining this feature.

It is planned to send suitable guides for local newspaper campaigns and articles for local publication covering all phases of gas installations and suggested tie-in material for use during the contests. The program will also be supported in many other ways which are now being developed in detail. The complete cooperation of the entire gas industry is required to assure the program's success.

The Certified Range Program

● **Digest of address by HUGH CUTHRELL, The Brooklyn Union Gas Co., Brooklyn, N. Y.**

THE Certified Economy Range has been born from the labor of a special committee of our association. Your committee was appointed early this year to study a certain problem. On March 18 executives of gas companies and manufacturing concerns met in Cleveland to discuss the need for improved gas appliances. This group authorized its chairman, B. J. Mullaney, to request President Russell to appoint a special committee to study the matter further and devise a program. President Russell concurred and appointed the committee, of which I am chairman.

Our purpose was stated as "the desirability and practicability of establishing 'super-requirements' for Laboratory certification of certain appliances, especially ranges—these requirements to include convenience and performance features to a degree not now specified for A. G. A. approval—which can be identified as aids to advertising and selling and would serve as a stimulus to manufacturers who desire to improve their products beyond minimum standards."

The minimum specifications for this new super range have been sent to member companies and manufacturers. These requirements represent the considered deliberations of the representatives of gas companies and range manufacturers who form your committee.

In preparing these specifications the committee has aimed to improve the performance, convenience and efficiency of the range in all details. For example, the specifications would improve the performance of the oven by having it reach a predetermined temperature in a limited period of time. Similarly in matters of performance the broiler must reach a predetermined temperature within a specified time. Also the range must have one or more top burners with a capacity of a given B.t.u. per hour.

From the standpoint of convenience this range must have automatic oven lighting with automatic cutoff valve and an oven thermostat. The broiler must have an

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Home Service Breakfast, Cleveland, September 29, 1937

Home Service Breakfast Is Popular

By JESSIE MCQUEEN

Home Service Counsellor

FOUR years ago a home service breakfast was announced with considerable trepidation. Our luncheon meetings in previous years had encountered much competition, and since sales managers and other executives were the people to be reached with our home service story, the breakfast idea was attempted. President Hewitt, Alexander Forward and W. C. Beckjord, then chairman of the Commercial Section, made up our A. G. A. executive support on the program although there were good-natured protests about " 'rising at the crack of dawn." Ruth Kleinmaier presided as chairman, and 75 attended that first breakfast in Chicago. The next year 115 were attracted to the breakfast, and in 1936 in Atlantic City there weren't even places enough at the start for the 185 persons present. At the Cleveland convention just concluded the convention ballroom was engaged and we welcomed 186—70% of whom were men.

The home service breakfast, therefore, has made its way to fame in A. G. A. conventions, and it is my belief that it has come about as the result of three or four reasons: first, we inaugurated a series of two-minute talks by home service directors on particular phases of home service operation which have proved exceedingly popular.

Executive participation has been another factor in our favor. Each year the president of the Association, the managing director, and the chairman of the Commercial Section under which the Home Service Committee operates, have attended the breakfast and presented greetings. Frequently the president-elect has attended, and in our audience we always find a representative group of gas company officials, all with a sincere interest in knowing just "what makes the wheels go 'round" in our home service work.

Informality in the breakfast meeting has come about through individual introductions. When the group became so large last year, we wondered if this tradition might not have to be given up. But what a protest—and at the Home Service Breakfast in May at the Natural Gas Convention in Kansas City where this feature was omitted, many people were disappointed and said so. So even though our Breakfast time is limited, for we must be through at 10:00 o'clock so as not to interfere with the General Sessions, this introduction habit will continue,—at least as long as the present Home Service Counsellor stays on the job.

And last but not least, we start promptly at 8:30. That reputation has spread so that this year about half our guests were at the doors at 8:15—all ready for the coffee eye-opener which is on the table as soon as the first person is seated.

So much for the story of the Home Service Breakfast.

Our program this year was in the efficient hands of Elizabeth Sweeney, chairman of the Home Service Committee and director of home service in the properties of the New York State Electric & Gas Corp., with headquarters at Geneva. Miss Sweeney presented the work of the Committee, mentioning particularly the preparation of a booklet on the equipment of school laboratories entitled "Modern Kitchens for Homemaking Instruction,"—then introduced in order President Herman Russell, Managing Director Alexander Forward, and chairman of the Commercial Section, F. M. Banks. Each of these speakers commended home service work and stated that its place in gas company operation was assured. Mr. Banks, as a suggestion for future work, requested more assistance to be given to com-

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WANTED: NAME FOR ALL-GAS DEMONSTRATION HOMES

In conjunction with the national contest for architects and designers for plans for "all-gas homes," the Home Appliance Planning Bureau of the Association has announced a contest for a name for the homes planned and built during the competition. Open to home service directors and assistants in home service departments, $200 will be awarded for the best name submitted before the contest closes on November 30, 1937. Rules of the contest require that a paragraph of not more than 50 words stating the reasons for the selection must accompany the name.

The winning name may be applied to the hundreds of demonstration homes throughout the country which will be built as a result of the architects' and builders' contests sponsored by the bureau. It is suggested that the name be short and significant. It refers to a home that is up-to-the-minute in style and construction, and equipped with the major gas appliances—range, water heater, refrigerator, house heating and air conditioning equipment. The word "gas" must not be used in the title submitted.

All entries should be sent to the American Gas Association, Home Appliance Planning Bureau, 420 Lexington Ave., New York, N. Y., not later than November 30.

Industrial Gas Section

Hale A. Clark, Chairman — Eugene D. Milener, Secretary — Frank H. Trembly, Jr., Vice-Chairman

Industrial Gas Section Meetings Feature Sales and Utilization Topics

A PROGRAM devoted to industrial and commercial gas sales and utilization, subjects of vital interest to both manufactured and natural gas men, was presented in three regular sessions and a luncheon meeting by the Industrial Gas Section at the Hotel Statler, Cleveland, during the annual convention, September 27-October 1.

The meetings started with the Industrial Gas Club luncheon on Tuesday, at which F. X. Mettenet, vice-president, The Peoples Gas Light and Coke Company, Chicago, was the principle speaker. Mr. Mettenet emphasized the interdependence of company and departmental managements in conducting industrial gas sales.

Ralph L. Manier, chairman of the section, opened the regular sessions Tuesday afternoon, with an address which reviewed briefly some of the factors contributing to greater industrial and commercial gas sales. His significant address was published in full in the October issue of the A. G. A. MONTHLY.

Various types of gas heating and atmospheres used in ferrous metal forging were discussed in a paper by Adam M. Steever, superintendent, Columbia Tool Steel Works, Chicago Hts., Ill. He favors the oxidizing atmosphere because it provides better fuel economy and the decarburization is slight. Furthermore the steels made by his company have a wide application for precision tools of all classes and depend upon absolute control of temperatures which gas fuel provides. Mr. Steever told about converting his furnaces, which have hearths up to 16 ft. in length, 7 ft. in depth, and with loading capacities up to 30,000 lbs. of product per charge, to gas fuel.

"During the several years of research and experiment preceding the first conversion," he declared, "an entirely new approach to the problem of gas use was responsible for the success of this installation. This new approach involved recognition of the fact that gas is a metallurgical chemical as well as a source of heat. Although gas, as a fuel alone, showed little superiority over other fuels, it is outstanding as a metallurgical chemical over all other fuels. This superiority is due to the flexibility of control, chemically and otherwise, making it possible to provide the exact chemical condition and reaction needed for a specific process and to deliver the exact quantity of fuel at any desired point.

"Control instruments were set up in recognition of these principles. They included recording temperature controllers, automatic gas and air regulating valves, a recording carbon dioxide recorder and accurate furnace pressure gauges and gas pressure regulators."

A rudimentary knowledge only of heat treating of metallurgy was recommended to gas men by Robert G. Guthrie, chairman of the Ferrous Metals Committee of the Industrial Gas Section in a paper entitled "What Industrial Gas Men Should Know about Steel." Information gleaned from such books as "Steel—Its Heat Treatment" by Prof. John Keller, the American Society of Metals Handbook, and lectures on the Heat Treatment of Steel by Dr. Marcus A. Grossman, is sufficient to put the industrial gas man in a position to cooperate with steel men interested in heat or atmosphere or both. Mr. Guthrie warned against taking the time to master a subject so highly specialized as modern metallurgy.

Albert A. Schuetz, Milwaukee Gas Light Company, addressing the Industrial Gas Section meeting. Seated are Ralph L. Manier, retiring chairman; Hale A. Clark, incoming chairman; and Eugene E. Milener, secretary

In a valuable paper on "Industrial Department Management," Albert A. Schuetz, Milwaukee Gas Light Co., Milwaukee, Wis., advocated salaries as against other methods of compensation. "All our men have been trained by the department and are on a straight salary basis," he said. "Other methods of compensation have been considered from time to time, but no substitute has been found which would work satisfactorily."

Touching on service Mr. Schuetz said: "Our records show that in about 30% of the calls made on new consumers, service of one kind or another is required but this 30% is getting less from year to year."

L. S. Reagan, Webster Engineering Company, Tulsa, Okla., vice-chairman of the Steam Generation Committee, gave a paper on "The Utilization of Natural Gas as a Fuel for Large Power Boilers and Steam Generators." This report was confined to gas as applied to conversion jobs. He warned against leaky baffles, saying that the "draft in each pass should be tested at least once each week for approximately four weeks after gas has been used, so as to check for leaks."

Speaking of furnace insulation he stated that few realize "how many B.t.u.'s per square foot are lost through the average fire brick wall of 13½" thickness, which is the usual thickness. By taking this 13½" wall and placing it in first class condition and backing it up with 4½" of insulating brick, 165 B.t.u.'s per square foot of surface can be saved with furnace temperature at an average of 2,200° F."

As to efficiencies he contended "that with proper burner equipment properly installed and controlled, an average of 75% overall efficiency can be obtained and maintained in both the straight tube and bent tube boilers without economizers and superheaters. When a superheater or economizer only is used, this can be stepped up to an average of 77%. When both superheater and economizer are used, it is possible to average as much as 80%. The above figures are not picked out of the air, but are from actual results of tests obtained from installations."

A unique feature of the Industrial Gas sessions was the holding of forums Wednesday and Thursday afternoons, which included a series of five-minute presentations on six subjects followed by open discussion from the floor.

Oliver L. Maddux, United Gas & Fuel Co. of Hamilton, Ltd., Hamilton, Ontario, was the leader of the first forum on "Unit Heater Applications in Commercial Establishments." In discussing this subject J. F. Quinn, The Brooklyn Union Gas Company, presented a tabulated survey of commercial heating jobs sold recently in his territory. The average monthly bill for these installations was about $22 during the heating

season and in nearly every instance the actual cost of heating was less than the estimated cost. He said that unit heaters today were in the same position as the gas-designed steam boiler was 15 or 20 years ago and that they offered the heat weapon with which to obtain new gas loads in all types of commercial establishments.

A plan for renting gas unit heaters used by his company was discussed by F. S. Pexton, Kansas City Gas Company. He stated that this plan has been successful and has been of material assistance in procuring heating loads which formerly the gas company had little chance of securing.

This subject was also discussed by Frederick T. Head, Consolidated Edison Co. of New York, and J. N. Crawford, The Bryant Heater Co., Cleveland.

The second subject, "Evaluation of Gas Commercial Cooking," was presented under the leadership of Terry Hart, Nashville Gas & Heating Co. This included valuable presentations by the following speakers: W. H. Frick, American Stove Co., Cleveland; R. D. Clark, president, National Restaurant Association, Cleveland; Roy E. Wright, Cambridge Gas Light Co., Cambridge, Mass.; J. E. Swenson, Minneapolis Gas Light Co.; and A. O. Leech, Portland Gas & Coke Co., Portland, Oregon.

"Developing Dealer Cooperation in Hotel and Restaurant Appliance Sales," was the third topic presented during the forum. T. J. Gallagher, The Peoples Gas Light and Coke Co., Chicago, led this discussion. Speakers were: C. H. French, Standard Gas Equipment Corp., New York; W. M. Jacobs, Southern California Gas Co., Los Angeles; H. A. Sutton, Public Service Electric and Gas Co., Newark; and W. J. Hill, Detroit-Michigan Stove Co., Detroit.

Immersion Units Discussed

At a forum devoted to the subject, "Heating Liquids with Gas Immersion Units," led by L. B. Crossman, Boston Consolidated Gas Co., C. H. Lekberg, Northern Indiana Public Service Co., Hammond, Ind., delivered a paper "Heating Liquids by Submerged Combustion," which described a new method of heating liquids.

In this method the flame is directed through a tubular combustion chamber which conducts the hot products of combustion down to and across the tank bottom where they may be vented and distributed to give the rate and control of agitation desired. This produces a violent agitation which is of particular value in such operations as pickling in steel mills. This method also opens up possibilities for the extension of gas service in other fields such as, for instance, the heating and agitation of cleaning solutions.

In the past year, Mr. Lekberg stated, one steel plant in the Hammond, Ind., territory, saved 72¢ per ton on all steel pickled by submerged gas combustion. This saving was sufficient to write off the cost of the gas burner equipment in a few months. This mill now has four submerged gas combustion burners replacing 70 boiler h.p. of steam. Equipment has been ordered to replace an additional 150 boiler h.p. and this will place all pickling and solution heating, in this plant, on the new gas method.

C. B. Mershon, The Manufacturers Light & Heat Co., Pittsburgh, and Homer T. Hood, Battle Creek Gas Co., Battle Creek, Mich., presented interesting discussions during this forum.

Karl Emmerling, The East Ohio Gas Co., Cleveland, led the forum which discussed "Convection Heating by Gas." Five-minute presentations were made by Edward Stephenson, Jr., Surface Combustion Corp., Detroit; W. F. Aylard, Chase Brass & Copper Co., Inc., Cleveland, and D. A. Campbell, Eclipse Engineering Co., Rockford, Ill.

The final subject discussed was "Wholesale Baking with Gas" led by Lawrence R. Foote, Central Illinois Electric and Gas Co., Rockford. The highlights of this subject were presented by Clinton B. Cole, Rochester Gas & Electric Corp., Rochester, N. Y.; L. E. Biemiller, Consolidated Gas Electric Light & Power Co., Baltimore; A. M. Thurston, The East Ohio Gas Co., Cleveland, and George A. Uhlmeyer, Peoples Power Co., Moline, Ill.

A number of valuable committee reports were distributed at the convention, a few of which may be mentioned here.

Gas Engine Report

The report of the Gas Engine Power Committee, of which E. J. Hatzenbuehler, Lone Star Gas Company, Dallas, Texas, is chairman contains the following worthwhile information:

1. Natural Gas engines now available and the approximate range of sizes produced by the various manufacturers.
2. Typical gas engine installations.
3. Analysis of gas engine accounts as reported by fifteen gas companies operating principally in California, Oklahoma, Arkansas, Louisiana, Texas, Georgia, Ohio and Pennsylvania.
4. Total engines reported in analysis of gas engine accounts, segregated according to types of industries served.

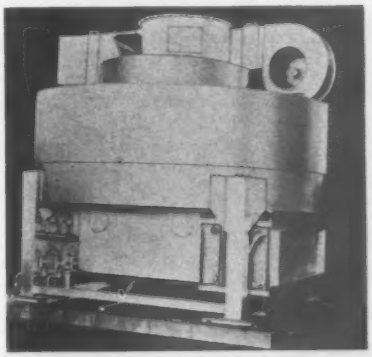
The Steam Generation Committee Report by W. W. German, Montana Power Co., Butte, chairman, deals with the technical phases of the use of natural gas as a fuel for heating process and power type boilers, not including large central station boilers. The report illustrates the latest development in burner equipment, furnace design as well as a number of unusual applications. It is replete with descriptions of specific installations and data from comprehensive tests.

Announcement of a new type large volume gas water heater incorporating principles long used in steam coil heaters was also made. In a report showing the basic engineering features of this new heater and the various steps taken in its development, the Volume Water Heating Committee, Lawrence E. Biemiller of Baltimore, Md., chairman, predicts that the advantages of gas service will be opened to an increasing number of large buildings and factories for water heating service.

Essentially the new gas immersion water heater consists of "U" shaped coils inserted in a water tank with gas burners firing into the coils. Both the inlet and outlet of each coil are welded into a removable head so that the coil is easily pulled out. Temperature control equipment and safety pilots are provided. Inasmuch as this new gas immersion water heater is not connected to a steam boiler, difficulties with circulation between storage tank and heating unit are eliminated. The heater can be placed anywhere, on the floor or up out of the way above existing machinery and equipment. First costs will compare favorably with other systems, it is predicted by the Committee.

Flexibility and lower fuel consumption are obtainable, where the volume of hot water used fluctuates, by installing multiple gas immersion units, and using only as many as are required from time to time. This new heater can be employed with high water pressures not permissible with direct systems using cast iron boilers.

Gas Lines Up for Better Movies



Gas-operated air conditioning type Lectrodryer—one of the machines described at meeting of Society of Motion Picture Production Engineers

DEHYDRATION air conditioning—The Gas Way—was featured at the Thursday, October 12, session of the convention of the Society of Motion Picture Engineers held in New York City during the week of October 11. Two papers were presented during the session, which was devoted to engineering practices, one by G. A. Kelley of the air conditioning department, Surface Combustion Corporation, Toledo, Ohio, and the other by George L. Simpson, vice-president, Pittsburgh Lectrodryer Corporation, Pittsburgh, Pa.

In both papers the particular advantages of the direct dehydration method of air conditioning as applied to film manufacture, drying, and storage as well as to air conditioning theatres were brought out. Specific examples were given and both talks were illustrated with interesting picture slides.

Discussion was led by J. C. Crabtree, Bell Telephone Laboratories, and on behalf of the gas interests was participated in by Eugene D. Milener, secretary, Industrial Gas Section, and J. C. Patterson, Carrier Corporation.

Technical Section

J. V. Postles, Chairman H. W. Hartman, Secretary F. M. Goodwin, Vice-Chairman

More Research Urged at Technical Section Meetings in Cleveland

RESEARCH, the key to the future, was the predominant theme of the scientists and engineers who contributed their views and a resumé of their work to make the Technical Section meetings at the nineteenth annual convention a success. The meetings, which were held on September 28, 29 and 30 in Cleveland, were characterized by vigorous discussion of engineering problems.

In his opening remarks, M. I. Mix, chairman of the section, who presided throughout the meetings, emphasized the necessity for more funds to carry on fundamental research to solve problems facing the industry. "We have keen oil and electrical competition, alert to take advantage of our shortcomings," he declared, "and we must mend our fences or be overrun in the stampede for new business by our competitors." Chairman Mix summarized the activities of the Section and expressed his appreciation for the splendid work accomplished by committees during the past year.

Conditioning Research

The subject of research received further attention during the first session from Oliver S. Hagerman, president, Atlantic Seaboard Corporation, New York, who contributed views on "Coordination of Gas Conditioning Research." Mr. Hagerman included facts supplied by a number of operating authorities on the present lack of complete purification. The summation of views presented clarifies the problem of the individual companies as well as the industry as a whole and facilitates selection of the most pressing difficulties for immediate study. The subject of gas conditioning cannot be summarized and forgotten and so Mr. Hagerman points to the vital need of coordinating our forces, pooling our resources and initiating a program that will produce results. A clear picture was presented of the important need for action and the assembled engineers lost no time in recommending the formation of a committee.

The executive has wondered, and the engineer pondered, on "Polymerization—What It Means to the Gas Industry" and so that title was used for a paper by F. E. Frey of the Phillips Petroleum Co. and J. S. Carey of the W. M. Kellogg Co. A brief summary would do injustice to a paper which, among other important things, allays the fears of water gas producers as to a future shortage of gas oil and presents facts to substantiate that conclusion. Mr. Frey indicated the rapidity with which the petroleum industry adapted developments in polymerization. The effect upon the gas industry may not be as originally supposed, a gradual lessening of supply or an increase in the cost of gas oil but may indirectly result from the explanation of the uses to which the petroleum industry can and cannot put the various types of liquefied gas. This presentation broadens the knowledge of gas engineers on an important raw product.

Chairman M. I. Mix presiding at the Technical Section meetings

Regulator Freezing Studied

M. A. Hardie, Jr., of the Montana Power Co., combines the scientific and practical attitudes in his paper on "Problems of Regulator Freezing." Included are the fundamental theories involved, the progress of research in and the overcoming of difficulties in regulators or other equipment from the accumulation of a frozen mass. The problem of stoppages in natural gas lines from ice formations is an important one. The difficulty has been to predict where a stoppage may occur and take the necessary precautions to avoid a lessening or discontinuing of the gas supply to customers. Mr. Hardie's treatise on the subject includes suggestions on avoiding as well as caring for ice formation difficulties.

The general addition of house heating in large quantities has necessitated the study of flues and flue materials. An important phase of this subject is "Corrosion of Metals and Alloys by Flue Gases" which has been the subject of research by the Rochester Gas & Electric Corporation. A summary of this effort was prepared by Louis Shnidman and Jesse S. Yeaw, and presented by Mr. Shnidman. This paper particularly emphasizes the importance of the chemist and research laboratory in the solution of practical problems. This study will be of particular value to those many companies who experience difficulties from flues but not sufficiently frequent to warrant research in their own laboratory. The discussion which followed the paper indicated the difficulty of predicting troubles from condensates in flues by an examination.

Gas Scrubbing Reviewed

"A Review of the Principles of Gas Scrubbing" by Prof. C. C. Furnas of Yale University called attention to the many instances in designing and operation of gas plant apparatus where scientific data could be easily applied which would improve the functioning of the apparatus as well as resulting in economy. Prof. Furnas included some data derived from actual tests on the effect of the rate of oil flow when scrubbing gases. The paper called attention to the important fact that the maximum rate of oil flow for scrubbing is as vital as the minimum.

The use of bare metals including alloys in sub-surface conditions has been largely a matter of opinion. Dr. Scott Ewing, A. G. A. Research Associate at the National Bureau of Standards, presented considerable data on "The Corrosion of Metals in Soils as a Factor in the Selection of Pipe Materials." While it has long been known that all metals and alloys corroded, the actual comparative rates with which deterioration occurs has been available only recently. In his paper, Dr. Ewing makes a valuable contribution to the actual data available on this important subject. The intensity with which Dr. Ewing has studied this subject makes him eminently qualified to present an unbiased report on the matter of metal corrosion in soils.

A unique feature of the Technical Section meeting was the showing of a motion picture, "Practical Training for Operating Men," under the direction of Dr. Morris S. Viteles, Personnel, Claims and Safety Department of the Philadelphia

(Continued on page 406)

Testing Laboratories

R. M. Conner, Director — Managing Committee: J. S. DeHart, Jr., Chairman — N. T. Sellman, Secretary

Gas Industry Leaders Inspect Laboratories

TWO brief programs were presented at the American Gas Association Testing Laboratories in Cleveland on Wednesday morning, September 29, for gas industry executives, magazine editors and other invited guests. J. S. DeHart, chairman of the Laboratories' Managing Committee, presided at the meetings, which were a special feature of this year's convention.

George W. Allen, secretary and treasurer of the Canadian Gas Association, addressed both groups on the importance of the Laboratories to the American and Canadian gas industries. "The constantly increasing number of approved appliances being sold each year," said Mr. Allen, "is an indication of the soundness of the entire program carried on here. In addition to the testing and certification activities which are centered here, the research contributions of the Laboratories are becoming increasingly important." Mr. Allen gratefully acknowledged the cooperation of gas companies and manufacturers in successfully carrying on the varied phases of the Laboratories' program.

B. J. Mullaney addressing one of the Laboratories' sessions

Testing Program Hailed

At the first session of the Wednesday morning program, B. J. Mullaney, as speaker, urged the gas industry to capitalize on the 7 million dollar investment the Laboratories represent. "To sell any commodity you must first establish the confidence and good will of the public in the product you sell," Mr. Mullaney pointed out. "The testing, certification and research program of the Laboratories," he said, "is the most effective means that the gas industry has of creating the consumer confidence and good will which are so necessary to its success."

Mr. Mullaney also emphasized the importance of tying in the work of the Testing Laboratories, with national and local advertising and expressed the hope that the Laboratories' Plan Book, developed with that thought in mind, would be promptly put into use by gas company executives. He stressed the fact that the Laboratories' program of the past ten years is now one of the gas and appliance manufacturing industries' strongest assets in meeting competition.

R. W. Gallagher, vice-president of Standard Oil Company, spoke to the visitors at the second meeting. Mr. Gallagher, who was the first chairman of the Laboratories' Managing Committee, expressed keen pleasure in the progress made by the Laboratories in the twelve years of their existence. "As I look back to 1925," he said, "when this establishment first began operations I cannot help but be impressed with the progress that has been made." Mr. Gallagher described the influence of the Association's testing and standardization program in the development and improvement of many automatic convenience features found on the gas appliance of today.

Expressing interest in those activities coming under the general heading of research, he stated that he believes the

R. W. Gallagher speaking on the A. G. A. Laboratories

Partial view of first special Laboratories' meeting, September 29

The East Ohio Gas Company singers at the A. G. A. Laboratories. J. B. Moore, leader, is on the extreme left

A. J. Gonnoud, Brooklyn, and G. I. Vincent, Syracuse, being shown the Laboratories' equipment by Kendall H. Flint

industry's greatest opportunity for advancement lies in that direction. "The Laboratories, operating as they do in the interests of the gas business as a whole, offer an ideal agency for carrying on fundamental studies of interest to all of our member companies," said Mr. Gallagher. "The work of the Laboratories has only begun and we may look forward confidently, I feel, to even more important and far reaching developments in the future."

As these pertinent speeches were concluded, selections by the East Ohio Gas Company Octet added further interest and variety to the morning's entertainment.

Visitors in attendance at both programs inspected the entire facilities of the Laboratories while guides reviewed briefly the activities carried on there.

The constant stream of visitors during the entire week of the convention indicated that the gas industry welcomed the opportunity to inspect the institution which serves as the center of the testing, certification and research activities of the American Gas Association.

SUPER-RANGE PROGRAM

(Continued from page 400)

automatic lighter with an automatic cutoff valve. Top burners must have automatic lighters and the heads must be of enamel or of non-rusting metal.

Of main importance is the efficiency required for this type of range. The specifications call for a limit in the cubic feet of gas permitted to attain the performance outlined. A 45% top burner thermal efficiency is required using A. G. A. standard utensils.

The Certified Economy Range meets these requirements. This range will be sold as such after March 1, 1938, by which date manufacturers are required to have their ranges approved as certified economy ranges. A year later these requirements will be increased. The preliminary requirements, to be effective March 1, 1938, were set up to enable as many manufacturers as possible to develop their plans and production so as to have these new ranges. Your committee did not want to make the specifications so difficult that only one or two companies could build this modern range. We believe that under the program established at least a dozen companies will have certified economy ranges available by March 1.

A. G. A. Requirements Remain

These specifications do not replace those required for the A. G. A. Seal of Approval. The Laboratory's minimum requirements will be retained. They form the first requirements for the new range. Yet the stress of competition requires additional requirements to identify the higher type of equipment for the most effective sales promotion, nationally or locally.

Any promotional campaign, however, cannot supplant the general sale of less complete types of gas ranges. Yet it is necessary for all gas companies to get in back of promoting this economy range and push it to the limit. If we do that, we will see a much higher grade of appliance in use on our lines. Also we will find the public demanding certain features which our promotion will continually stress.

The range is our first test. From it your committee proposes to go on and take up other appliances. We intend to effect improvements throughout our domestic appliances.

There is another major point in this appliance program. We must have adequate service. There is no real gain made by producing and promoting a superior appliance if we can not do the rest of the job—provide equally superior gas service. Under gas service I have two thoughts in mind. One concerns the manufacture and distribution of gas fuel. The other concerns the actual installation and servicing of gas appliances.

With improved service and proper promotion, our gas range offensive should be successful. We have a product that will attract customer attention and develop desire. We have a range that meets the customers' needs today. We have the organization that can do the job of putting it across. We need cooperation from all. With cooperation we will make the American public fully conscious of the Certified Economy Range. We will have Mrs. Consumer agreeing that gas is best by far for cooking.

TECHNICAL SECTION MEETINGS

(Continued from page 404)

Electric Company. The film portrayed the methods employed from the time an applicant approaches the company through the training period to his initiation into actual practice. While the picture dealt entirely with the training of an electric linesman, the system is adaptable to all types of industrial work. An outstanding feature was the simplicity of the method. The rapidity with which a superior employee was produced, compared with the old method of strictly field training, was a surprise to, but readily admitted by foremen of long experience. Dr. Viteles and his co-worker L. G. Witmer commented on the methods and answered all types of questions relating to the training method. Interesting to many was Dr. Viteles' statement that many phases of the method were equally applicable to large or small companies.

A real drama of the gas industry was portrayed by E. A. Munyan of the Cincinnati Gas & Electric Co. under the title "Experiences in Cincinnati and the Ohio Valley During the 1937 Flood." This presentation fills a real need for material showing the vital part which the gas man plays in the drama of every-day life. Mr. Munyan's dramatic presentation of this human interest story should be made available to every employee of the gas industry so that he will realize his own part in the maintenance of unbroken gas service is not unnoticed.

Major committee reports were presented by the Chemical Committee, J. F. Anthes, The Brooklyn Union Gas Company, chairman; the Gas Production Committee, R. E. Kruger, Rochester Gas and Electric Corp., chairman; and the Distribution Committee, D. P. Hartson, equitable Gas Co., Pittsburgh, chairman. The reports of these committees indicated that even the usual high standard of attainment in the conferences had been ex-

ceeded. A resumé of these reports would be impossible in the confined space available, but they may be obtained in printed form from Association headquarters.

HOME SERVICE BREAKFAST

(Continued from page 401)

pany employees—instruction on the operation and use of equipment and its selling features to women—so that all company employees could be termed "selling fools."

Five home service directors participated in the "two-minute" symposium. Margaret Nevins, The Syracuse Lighting Co., Inc., described home service participation in the housing development of that company in their Five Star Home Program. Mrs. Eleanor Kingsley, Worcester Gas Light Co., Framingham, Mass., chairman of the home service group of the New England Gas Association, outlined their sales programs in the home service study work this year. Hulda Ungericht, The Ohio Fuel Gas Co., Columbus, described the 1938 program of the Gasco Cooking Schools.

Mildred Bailey, Public Service Electric & Gas Co., Newark, N. J., had the interesting assignment "Home Service in National Advertising." Her paper listed ways in which this cooperation is being carried on in a great many home service departments throughout the country. Mildred Clark, Oklahoma Natural Gas Co., Tulsa, inspired the group with the statement that home service can make home cooking pay. Miss Clark justified the so-called decorative demonstrations by proving that to teach women how to prepare food attractively in the home was one of the ways of interesting them in more home cooking.

Miss Sweeney, in closing the program, introduced the incoming chairman of the Commercial Section, H. H. Cuthrell of The Brooklyn Union Gas Company, and the incoming chairman of the Home Service Committee, Mildred Clark of Tulsa.

LUNCHEON CONFERENCES

(Continued from page 397)

We'll start four liveliest meetings you have ever seen.

John Williams has a prize assignment, Credits and Collections
A subject that is meat and drink to this Accounting Section.

You really should attend the meeting led by Edward Tucker
'Cause Customer Accounting jobs were really never tougher.

The problem that will give Herb Ehrmann greatest cause for woe
Is what to do with all the General Accounting overflow.

An extra lot of Cleveland Cops may rush from many stations
When Gordon Ross takes off the lid of Customer Relations.

Tickets are on sale until tomorrow half past ten

Cable Addresses

The cable address of the American Gas Association is AMERIGAS, NEW YORK.

The cable address of the American Gas Association Testing Laboratories is AMERGASLAB, CLEVELAND.

Use of these addresses will greatly facilitate delivery and lessen cost of cables to the Association.

We hope to have your buck two bits at least as soon as then.

So make a date right now to come, your clutch in fast high gear
And sit yourself right down prepared to give and take an idea.

Whether or not it was the result of poem, the Luncheon Conferences were very successful and well attended.

On the day following the luncheon conferences, Herbert E. Cliff, chairman of the Accounting Section, in opening the Accounting Section meeting, thanked the Luncheon Conference Committee, especially the chairman, for the excellent work they had done. Mr. Cliff thought it fitting that any acknowledgment of the committee's efforts should be given along the same lines as the Luncheon Conference Committee report was given, so he read a poem entitled "A poem to end all poems."

The chairman of the Luncheon Committee,
On Tuesday presented a little ditty,
Extending his official greetings,
And urging attendance at his meetings.

Over 200 members heeded his plea
For a buck two bits in currency.
Ideas were given—ideas were taken,
In attending these meetings, none was mistaken.

To all the conference leaders,
We extend our heartfelt thanks,
And we hope that this committee,
Will continue to play its pranks.

An eye for an eye—a tooth for a tooth,
Repayment in kind is but fair—forsooth,
So I dedicate this poem to George B. Webber,
May it end all poems in this section, forever.

SERVING AMERICAN INDUSTRY

(Continued from page 385)

They have always considered the fields of gas utilization their special right to invade. Is it possible that the gas industry is now ready to carry that competition into the industrial power field? It is already meeting the test of customer acceptance on a minor scale. As a measure of sales aggressiveness, what do you think our electrical brothers would do with it to worry you, if our positions were reversed?

The recent development, started by Ralph Wenner in Toledo, of mechanically connecting the gas engine through the induction motor to the mechanical load has a great merchandising merit, aside from its mechanical soundness. So in still another field you have the opportunity to interpret the soundness of your service to your customers.

As an added factor of merchandising advantage in the power field consider where this development stands, in the current trend of events, if industry decides it wants to use fuel for power generation, which involves a minimum of labor cost from the field to its final utilization in their plants. This factor of total labor costs is becoming of increasing importance and may be of considerable weight in this market.

I asked a moment ago by what record of public acceptance, performance or novelty serious inroads could be made in the domestic field. Those factors are in good shape and give you something fine to sell. The competitive results will depend on your record of salesmanship. Failing in that serious inroads will be made simply because the world stopped long ago beating a path to the maker of the best mouse trap—if it ever did. You must go to the buyer.

Over-all Picture Optimistic

We need to look more at the over-all picture of our industry. The accomplishments and romance of the instances I have cited in the industrial field should enthuse every salesman whether he is talking about a million-foot industrial load or a ten-foot water heater load.

Let's stop laughing at the dreamers, educate our employees to a proper understanding of the fine record and accomplishment of our industry, raise our standards of salesmanship, improve our market analysis and plan ahead with an aggressiveness and vision which anticipates our problems before some extreme emergency necessitates a drastic revision in practice and policies. You have a wonderful record achievement which is more a credit to the intrinsic values of your product than to your planning and salesmanship. Bring up the latter to the standard of the former and the future will bring you much to be proud of.

NATURAL GAS CONSERVATION

(Continued from page 381)

oil, due to high pressure. This gas can and should be utilized as oil is produced. Again we find formations containing both oil and gas. At times these are separated by a shale bed or some other impervious formation, but with continued drilling the seal is broken, the oil and gas are allowed to become associated, and the gas is dissipated in producing the oil.

In many gas-oil fields gas companies have large holdings, especially in those fields which originally were thought to be gas fields, but in which oil later was discovered on the flank of the structure. Often oil has been discovered after deeper drilling, and gas has been wasted in its production. The problems facing the gas companies are the protection of their reserves, and the means of marketing the escaping gas. The heavy investments in main transmission lines require that we avail ourselves of all gas accessible to them, in order that the lines' period of usefulness may be prolonged.

The natural gas and oil producers certainly have a common problem and a common interest. It is to the advantage of both to have conservation orders and compliance with them, and it is to the advantage of both to use fully all the technical knowledge possible to prevent waste. The gas phase of the reservoir energy is a large factor in determining the percentage of oil which may be produced from a reservoir, and as oil can be more economically produced under a flowing pressure than by artificial means, it is to the oil man's interest to conserve the gas energy.

If gas is conserved and produced in a regular and orderly manner, two results follow: first, gas and pipe-line companies can take the gas for their systems; second, gas energy may be conserved to lift oil and greater oil recovery is assured, and more costly artificial lifting of oil is longer avoided.

The taking by pipe lines of what we sometimes now think of as waste gas permits shutting in of other gas. While this adds in investment, it permits holding of reserve gas in other reservoirs for future market demands.

I predict that as these common problems of the oil producer and the gas producer increase with development of deeper horizons we will find a much closer understanding and working basis between them. Everything coming out of a well, both oil and gas, must be utilized to obtain the most profit from the investment and to prevent waste, but we cannot do this if gas is produced faster than it can be marketed or utilized properly. This can be accomplished only if the oil and gas industries work together in solving these common problems, and then working together, cooperate helpfully with State regulatory bodies. In the final analysis, such a program, to be effective, will need proper State laws followed by proper regulatory orders under those laws—orders which will be enforced. I am not advocating governmental control of the gas or oil industries; practice merely has shown that in the matters of conservation and proration more consistent and beneficial results have been obtained under wise State orders and rules than by voluntary agreement among all operators in any one State.

The gas industry has the opportunity and should assume the responsibility of cooperating whole-heartedly with the oil industry and with regulatory bodies to secure the best gas conservation program possible in the production of oil. The oil industry has the opportunity of cooperating with the gas industry and regulatory bodies to secure more efficient use of gas energy to produce oil and obtain revenue from gas produced as well as from oil. State regulatory bodies certainly will appreciate the opportunity to cooperate with serious efforts of industry. Cooperation of the two industries and regulatory bodies will in time accomplish results that will at least approach those accomplished in prevention of waste from gas wells alone, and these results will accrue to the benefit of the gas industry, the oil industry and the public.

Personnel Service

SERVICES OFFERED

Young man, married and now employed, having nine years' experience with a manufactured gas company, during which time he has served in all departments, desires to make a change for the purpose of advancement. Prefer **cadet** engineering (29). **1144.**

Gas Engineer. College trained, age 38, married. Fifteen years' experience in all types of production high and low pressure distribution and transmission, construction and installation. Industrial and commercial installations and service a specialty. **1145.**

As salesman or **selling agent** representing manufacturer in gas appliances, gas fired boiler, ranges, water heaters and the full line, have established trade for past fifteen years in metropolitan area. New York and two hundred mile radius. **1147.**

Sales Engineer (M.E.) Thirteen years' experience in refrigeration and air conditioning, including research and development work in the utilization laboratory of a leading gas company. Additional experience in the problem of sales promotion, special applications and development of absorption refrigerators of both household and commercial size. **1148.**

Factory Representative, long established in the east, is desirious of adding another representation to his existing line. Experienced in industrial equipment as well as distribution and manufacturing ends of gas business. **1149.**

Operator (29)—7 years' experience in all phases of gas business including water and coal gas operation, distribution, service, installation, sales and office work in large and small companies. Manager in three properties. General superintendent in three others. **1150.**

SERVICES OFFERED

Sales Engineer, capable of managing house heating department in all its branches, covering surveys, installations, estimates, sales promotion, service, repairs and maintenance. Experience also covers industrial field with regard to high and low pressure boilers and large volume water heating. Married. **1151.**

Sales Engineering. Long experience merchandising gas appliances both for utilities and manufacturers. Surveys, sales, specifications and servicing for householding, water heating, hotel and restaurant and industrial gas applications; utility or manufacturer. **1152.**

Gas Engineer (graduate) desires position with firm manufacturing water gas or coke-oven gas. Initial salary unimportant. One year experience in coke-oven operation. **1153.**

Gas Engineer—1937 Ph.D.—Graduate in gas engineering, wide experience in gas distribution, business administration and scientific research. Good personality. Desire connection in research or distribution; assistant to executive. (31). **1154.**

Can I Help You in **promotion** of **appliance sales,** load building and public relations? College man, six years' gas utility public contact experience. Meter reader to credit manager, including high bill adjustment. Now employed New York office large industrial. Record proves successful promotional experience. Trained in advertising, merchandising. Qualifications distinctive. **1155.**

A Good Salesman—over ten years with national manufacturers distributing gas appliances, air conditioning and pipe fitting specialties. Knows gas officials throughout East and Midwest. Can promote sales by proven methods. Understands advertising helps and is prepared for sales directing work. Wants a good opportunity. **1156.**

SERVICES OFFERED

Attorney and Engineer, E.E., Ph.D., LL.B., 11 years' experience, desires connection with public utility corporation with opportunity for advancement, where ability is appreciated, and a need exists for one trained in law, economics and engineering. **1157.**

Propane Butane Experience—a young graduate engineer having experience in testing, utilization, and purchasing in the liquified petroleum gas industry, desires similar employment in same or related fields. Will locate anywhere, and is free to travel. Salary secondary to opportunity. **1158.**

Appliance Salesman—Twenty years' experience selling gas appliances in all eastern and southern territories. Interested in the exclusive sale of nationally known, or equal products to act as a manufacturer's agent. Have personal contacts with all wholesale and retail dealers and utility companies. Will organize selling force with proper lines. **1159.**

POSITIONS OPEN

Valuation Engineers—Personnel Service has recently received several requests for competent and experienced valuation engineers, (a) having experience in inventory and mapping of gas distribution systems, using old construction orders and doing some field checking; (b) leaders to head up junior and senior engineers, with valuation experience and capable of handling other men and (c) valuation work and cost analysis.

Those interested in these vacancies, which while described as temporary, apparently are expected to require some time for completion, if not listed with A. G. A. Personnel Service, should send information about themselves. **0329.**

1938 Advisory Council

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